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ABSTRACT

A broad-bases study of the ways in which Hispanics in the United States are dealing with the English language is presented. The report analyzes the latest reliable language data collected by the U.S. census, including the 1980 national census, and finds a steady shift in language usage from Spanish to English among immigrants and native-born Hispanics. Chapters address these topics: (1) theory and method in the analysis of language shift; (2) the size of the Spanish origin group; (3) the structure of the Spanish origin group; (4) a nativity profile of the Spanish origin group; (5) language shift among immigrants; (6) language shift among the native-born; (7) regional aspects of language shift; (8) the urbanization of the Spanish language population; (9) ethnic origins of this population; (10) modeling population growth in this group; and (11) projections of its size and composition. Appended materials include notes on interpreting the 1980 census data, technical data, and a comparison of the University of Quebec at Montreal and U.S. Census Bureau models. (MSE)

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The Future of The Spanish Language In the United States

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By
Calvin Veltman

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For
Les Silverman

The Veltman Report:
What It Says
What It Means

The assumptions in the national media, reflecting the belief of many Americans that Hispanics are reluctant to learn English or to acknowledge its central place in our economy, are unwarranted and unfounded. Hispanics accept English as the primary language of the nation and recognize that its acquisition is of critical importance to their success in the United States. Moreover, virtually all Hispanic parents are staunch supporters of solid English instruction.

The Veltman Report should reassure the nation that its Hispanic residents and citizens are learning English and using English. They are fulfilling the terms of the immigrants' unwritten social contract—they are adapting to the language and customs of their adopted land. Like all other immigrants before them, they are moving through a language shift process which spans three generations. The generation of immigrants generally continues to speak Spanish, although most people also speak English on a regular basis. Most of their children generally speak English, although they continue to speak Spanish as a second language. Most of their grandchildren will not speak Spanish on any regular basis, if at all.

Yet the myth that Hispanics do not (will not) speak English persists and is driving an ever-widening wedge between Hispanic and non-Hispanic citizens and residents. Moreover, broad dissemination of the myth is promoting the

very suspicions and ethnic tensions that obstruct the adaptation process of Hispanic immigrants, and reduce the opportunities of native-born Hispanics to participate fully in the economic, political, and social lives of their communities. The perpetuation of the myth spawns misconceptions that send a message of rejection to Hispanics: "We don't trust you—we don't like you—we are threatened by you—we don't think you can fit in—you are too different—and *there seem to be far too many of you.*"

Almost every wave of immigrants that washed over our shores met with similar rejection. The clear evidence of the solid adaptation of Italians, Irish, Polish, Hungarian, Ukrainian, Asian, and Jewish people—all initially deemed hopelessly, indeed dangerously unsuitable for citizenship—does not diminish the high levels of stress and threat many Americans continue to experience whenever a significant number of newcomers appear upon the scene.

We at the **Hispanic Policy Development Project** choose to believe that most of those who were troubled by past immigrant waves and are disturbed today about Hispanics were and are expressing sincere concern, not mindless prejudice. We believe that their concern and the negative conclusions they draw reflect, more often than not, a lack of information or, in some cases, an inadequate understanding of the significance of the information available to them. In many instances, individuals' misconceptions are based on personal experiences that limit their views to narrow slivers of a large and complicated reality. Sporadic keyhole glimpses generally do not illuminate the big picture.

The Veltman Report was commissioned by HPDP to focus a wide angle lens on the big picture of how Hispanics in the United States are dealing with the English language. What's happening? Those of us who live and work in the Hispanic communities have first-hand and personal knowledge of the steady shift from Spanish to English, but our experiences cannot be accepted as more than informed opinion or anecdotal evidence. HPDP commissioned **The Veltman Report** to back up informed opinion with a scientific analysis of how Hispanics are learning and using the English language. The report analyzes the latest reliable language data collected by the U.S. Census, including the 1980 national census. Population projections are, however, based on data derived from the 1976 Survey of Income and Education because it contains the best available language data for

both mother tongue and current language use. The population model used by Dr. Veltman is similar to that prepared by the U.S. Census Bureau but adds language practice and language mobility factors.

About Hispanic Immigrants

Hispanic immigrants are learning and using English very rapidly after their arrival in the United States. Dr. Veltman has previously suggested in his book, *Language Shift in the United States* (1983), that Hispanic immigrants are assimilating English more rapidly than previous waves of immigrants.

In this study he shows that how fast individuals learn English and how much English they speak at any given time is related to (1) how long they have been in the United States and (2) how old they were when they arrived.

The Report tells us that *by the time they have been in the country for 15 years, some 75 percent of all Hispanic immigrants are speaking English on a regular daily basis.*

Belying the popular belief that the presence of large concentrations of Hispanics in one place will delay acquisition of English, the data show that Hispanics in urban centers learn English more rapidly than do those who live in rural environments. This may well reflect the need for greater verbal skills in many urban jobs; language the world over historically has been tied to utility and trade.

First-generation Hispanic immigrants do not, however, become English monolinguals. Language is not something that can be thrown or bleached away. *Almost all Hispanic immigrants remain lifetime bilinguals.* They use different languages in different situations with different people in different settings.

However, *more than half the immigrants who arrived in the United States before they were 14 have made English their usual everyday language, relegating Spanish to the status of a second language. A small number, in fact, no longer speak it at all.*

About Native-born Hispanics

The children of first-generation immigrant parents become fluent English speakers. Most of them have some knowledge of their parents' native language as well, because they heard it early in their lives in their homes and in their

neighborhoods. Nonetheless, *seven out of 10 children of Hispanic immigrant parents become English speakers for all practical purposes, and* their *children—the third generation—have English as their mother tongue* (or first language).

Because of on-going immigration, bilingualism may persist longer among Hispanics than it did among other immigrant groups, particularly in certain geographical areas. Immigration, however, does not delay the acquisition of English by the native born or by the immigrants themselves—and, were all immigration to be halted, Spanish would not long survive in any significant manner in any area of the United States.

How Does This Reality Translate Into Numbers?

In 1976 there were 10.5 million persons in the United States who could speak Spanish. Approximately 4.5 million of this number were predominantly Spanish speaking; the remainder preferred English, including more than 2 million who reportedly did not speak Spanish on a daily basis. At this same point in time there were in the United States an additional three million-plus persons of Hispanic ancestry who were English monolinguals, not speaking Spanish at all.

Using a model that projects a net increase in Hispanic immigration at the rate of 250,000 per year and birthrates of approximately 3.0 children for women who did not speak English well and 2.4 for those who could, we arrive at the following conclusions:

> The Spanish speaking group, both monolingual Spanish speakers and bilinguals—individuals who speak both Spanish and English— will total 16.6 million by the year 2001.
>
> By the year 2001, however, an additional 4.4 million persons of Hispanic ancestry will have abandoned Spanish and become English monolinguals.
>
> The maintenance of Spanish language use depends on the continuous arrival of new Hispanic immigrants. Any interruption in the immigrant stream would stabilize the size of the Spanish-speaking population for approximately 15 years, after which a progressively more rapid decline would set in.

What Are The Policy Implications?

The Veltman Report's findings provide the private and public sectors with important information to guide them as they design policies, programs, and strategies to develop the Hispanic markets, assist Hispanic families to adjust to their new lives, educate Hispanic children, and prepare Hispanic youth to move into employment.

The Private Sector: The Hispanic Market

The findings of **The Veltman Report** have significant advertising and marketing implications.

Hispanics represent a rapidly expanding 120-billion-dollar domestic market that is as yet relatively untapped. Because the Hispanic market is segmented by recency of migration, sub-group differences, socio-economic differences, and language use differences, many advertisers have been bewildered and unsure of how to approach it. Some have concluded that sorting it out is just too much trouble, and have opted to wait until Hispanic immigrants shift into English and can respond to their general-audience marketing.

***The Veltman Report** suggests the prudence of a market strategy addressing the Spanish speaking—monolinguals and bilinguals—in Spanish.* The numbers themselves are compelling: 16.6 million persons in the year 2001. In addition, we believe that in a highly competitive environment there is much to be gained by extending a welcoming hand, in a culturally sensitive manner, to potential consumers when they are in the process of familiarizing themselves with new markets and products. The demonstrated brand loyalty of Hispanics—a loyalty that can span generations—further reinforces the benefit of bringing products and services to the attention of Hispanic immigrants and their children in the early years of their residence when they are captives of the Hispanic media. It is true that as their English improves, Hispanics explore, read, listen, and watch English language media. This behavior helps them learn English and better understand our culture. Most Hispanic immigrants will return with some regularity to Spanish language media. In addition to the Spanish monolingual and bilingual populations, some English bilinguals also make use of Spanish language media and could be reached via Spanish-language advertising.

Public Services

As we look at the large numbers of Hispanic individuals who are concentrated in a relatively small number of markets — individuals who are in the process of learning English and shifting from one language to another—it becomes clear that there are reasons, both practical and humane, for the provision of basic services and public announcements in both Spanish and English. Because language shift is not accomplished overnight, it is appropriate that basic services and helping institutions speak to Hispanic immigrants and young children in a language they can understand. Furthermore, many Spanish monolinguals are elderly. It is both practical and compassionate to offer them services in their own language. It is not only appropriate, it is a policy that is worthy of a great nation which is confident in its power to attract and integrate new citizens.

Failure to provide such services blocks rather than hastens the adaptation of non-English or limited English speakers. If we believe that it is important that Hispanics participate in our society and shoulder the responsibilities of good citizenship, then we must make it possible for them to do so. The newly arrived who are welcomed in their own language are likely to accustom themselves more rapidly to our ways and to the English language.

Isolating groups and individuals by denying them communication in a language they can understand slows their integration into the mainstream. Although Hispanics are absorbing English at a rapid rate, with Spanish transitional services they would learn even faster.

At the same time, there is a desperate need for the provision of increased opportunities for individuals to learn English. In addition to the lack of adequate programming for school children, there is a huge unmet adult need. At present there are long lists of adult Hispanics in a number of cities, notably Los Angeles and New York, who are waiting to enroll in English classes.

Education

As a result of immigration, the population increase from Spanish speaking countries is likely to average 250,000 a year for the foreseeable future. We know that immigrant children, as well as the native-born children of immigrant parents, enter school speaking Spanish. It appears, then, that the best inter-

ests of the nation and these children are served by *programs that teach English and simultaneously develop basic reading and computation skills in Spanish.* At present less than a quarter of the Hispanic children who need language assistance are enrolled in Transitional Bilingual or other programs designed to expedite language shift and provide basic skills education. As a result, we find that at least 25 percent of Hispanic youngsters fall behind and are overage for grade when they enter high school. We have learned that doing poorly and being older than one's classroom peers contributes directly to cumulative Hispanic drop-out rates of 45 to 50 percent during the high school years. An additional 25 percent of Hispanic students who enter high school graduate without sufficient skills to enter today's labor market.

Given the data which show that a large amount of human resources are being squandered through under-education of Hispanic youth, anything which would help such children do well in school and stay in school would be nationally desirable. Since we now know that both immigrants and their children adapt very rapidly to English, and even make it their own favorite language, we should not stand in the way of bilingual educational programs which have proved themselves effective tools to promote educational attainment.

Employment

Hispanics are concentrated in the metropolitan areas of five states—California, Texas, Illinois, New York, and Florida. In some areas they will become the majority of the entry-level workforce. Their lack of educational preparedness is of increasing concern to business, industry, and government, particularly in light of the structural changes in the economy that require higher skills for entry level employment. The manufacturing and manual labor jobs that historically were filled by immigrants and provided an upward-mobility ladder for their children are disappearing. The growing mismatch between the skills Hispanics *require* and the skills Hispanics *acquire* calls for increased emphasis on both education and job preparation. Central to the success of these training endeavors is the development of practical cooperation between the private sector, on the one hand, and the education and job training establishments.

Educators, job trainers, and policy makers alike have virtually ignored business and government's long-range need

for literate English/Spanish bilingual professionals to service international trade and diplomacy. It is projected that there will be 550 million Spanish-speaking consumers in Latin-America by the turn of the century. The economic well being and the influence and diplomatic standing of the United States would be served by a conscious effort to conserve and foster a large bilingual pool of *literate* Spanish speakers. Data from the federal Center for Education Statistics show that only 4 percent of Hispanics take the three years of high school Spanish that is the minimum required to be able to write properly in a language. Both educators and professional trainers might well focus attention on the preparation of individuals for bilingual employment opportunities.

In Sum

English language acquisition is affected by what individuals do and by the learning opportunities that are available to them. A Hispanic immigrant who attends English classes and has a job in which interaction with English speakers is required, or a school-age child who is learning English in a Transitional Bilingual or English-as-a-Second-Language program and interacting with English-speaking peers, are both likely to acquire more English faster than is the immigrant Hispanic mother who must stay home all day caring for small children.

Shifting from one language to another is a process. Although the Veltman Report documents extensive language shift within 10 years of arrival in the United States, nobody does it overnight. It is not accomplished without effort; think of the legions of people we all know who bemoan the fact that they took *years* of French, or Spanish, or German and still can't speak a word of it. We then should not be impatient with or threatened by new Americans who are struggling to acquire fluency in what is for them a foreign language. And we should not be surprised or dismayed by the fact that they tend to communicate with their children in the language they can handle.

Parental responsibility is a weighty matter that involves the transmission of complicated values, discipline, knowledge, self esteem, and affection. It requires communication with a sophistication, subtlety, and nuance not available in a half-mastered language. Second, a child's development of language—the ability to deal with language logic and structure—is a mysterious interactive process that requires babies

and toddlers to hear language and to be constantly engaged in conversations. It is unreasonable to imagine that parents can converse easily in languages they are in the process of learning. If children were exposed to their parents' halting English from birth to age six, they would arrive in school with an underdeveloped sense of how language works and what it does. It is far preferable that they come to school with language development in Spanish, and then transfer that understanding from Spanish to English. This is the point, frequently misunderstood, of *transitional* bilingual education.

The vast majority of U.S. Hispanics voluntarily arrived within our borders prepared to make a place for themselves in a pluralistic, English-speaking society. They do not scorn English, nor do they threaten it. Hispanics in the United States are following the U.S. immigrants' historical three-generation pattern of abandoning the ancestral tongue, despite a demonstrated need for literate Spanish-speakers.

It may well be that we are looking at Hispanics and language in the wrong way. In light of demographic changes and shifts in the structure of international markets, the national interest may best be served by preserving the valuable Spanish-language resources we now are allowing to wither away.

Hispanic Policy Development Project

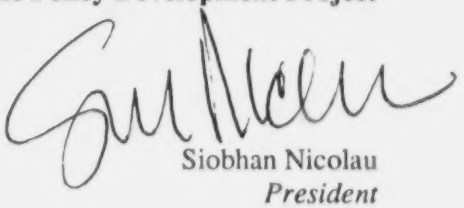

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Table of Contents

The Veltman Report—What It Says, What It Means		i
Introduction to the Study		1
Chapter 1	Theory and Method in the Analysis of Language Shift	6
Chapter 2	The Size of the Spanish Origin Group	10
Chapter 3	The Structure of the Spanish Origin Group	22
Chapter 4	Nativity Profile of the Spanish Origin Group	30
Chapter 5	Language Shift Among Immigrants	38
Chapter 6	Language Shift Among the Native Born	46
Chapter 7	Regional Aspects of Language Shift	51
Chapter 8	The Urbanization of the Spanish Language Population	67
Chapter 9	Ethnic Origins of the Spanish Language Population	74
Chapter 10	The Spanish Language Group: Modeling Population Growth	86
Chapter 11	Projections: the Size and Composition of the Spanish Language Group, 1976-2001	101
Appendices	Appendix I: Interpreting the 1980 Census Data	111
	Appendix 2: Technical Data	114
	Appendix 3: Comparison of the UQAM and U.S. Bureau of the Census Population Models	131

List of Tables

Table 2.1	Language Background: Spanish Origin Group, Persons Four Years Old or More, United States, 1975	12
Table 2.2	Current Language Use: Spanish Origin Group, Persons Four Years Old or More, United States, 1975	12
Table 2.3	Mother Tongue of the Spanish Origin Group: Persons Four Years Old or More, United States, 1976	15
Table 2.4	Current Language Use: Persons Four Years Old or More, Spanish Origin Group, United States, 1976	15
Table 2.5	Language Background of the Spanish Origin Group: Persons Four Years Old or More, United States, 1979	17
Table 2.6	Current Language Use: Spanish Origin Group, Persons Four Years Old or More, United States, 1979	17
Table 2.7	Number of Persons Responding «Spanish» to the Language Questions Appearing in Four National Surveys, United States, 1980	18
Table 3.1	Mother Tongue by Age Group: Spanish Origin Group, United States, 1976	24
Table 3.2	Language Use by Age Group: Spanish Origin Group, Persons Four Years Old or More, United States, 1976	24
Table 3.3	Language Use by Mother Tongue: Spanish Origin Group, Persons Four Years Old or More, United States, 1976	27
Table 3.4	Language Use by Age Group: Spanish Mother Tongue, Persons Four Years Old or More, United States, 1976	27
Table 3.5	Language Use by Age Group: English Mother Tongue, Persons Four Years Old or More, United States, 1976	28
Table 3.6	Language Use by Age Group: Other Mother Tongue, Persons Four Years Old or More, United States, 1976	28

List of Tables, continued

Table 4.1	Period of Immigration of the Spanish Origin Group, 1975-1980, United States	32
Table 4.2	Place of Birth by Period of Immigration: Spanish Origin Group, United States, 1980	32
Table 4.3	Parental Place of Birth for Native Born Members of the Spanish Origin Group: Persons Four Years Old or More, 1979	33
Table 4.4	Mother Tongue by Period of Immigration: Spanish Language Group, United States, 1976	35
Table 4.5	Language Use by Period of Immigration, Spanish Mother Tongue: Persons Four Years Old or More, United States, 1976	35
Table 4.6	Language Use by Period of Immigration, English Mother Tongue: Persons Four Years Old or More, United States, 1976	36
Table 4.7	Language Use by Period of Immigration, Other Mother Tongue: Persons Four Years Old or More, United States, 1976	36
Table 5.1	Age at Time of Arrival by Period of Entry: Immigrants of Spanish Mother Tongue, United States, 1976	39
Table 7.1	Size of the Spanish Origin Group: Selected States, United States, 1976	52
Table 7.2	Mother Tongue of the Spanish Origin Group by Place of Residence, United States, 1976	52
Table 7.3	Nativity Profile by Place of Residence: Persons of Spanish Mother Tongue, United States, 1976	54
Table 7.4	Place of Residence by Period of Immigration: Persons of Spanish Mother Tongue, United States, 1976	54
Table 7.5	Language Use of Immigrants: Persons of Spanish Mother Tongue Four Years of Age or More by Place of Residence, United States, 1976	55
Table 7.6	Language Use of Native Born: Persons of Spanish Mother Tongue, Four Years of Age or More by Place of Residence, United States, 1976	55

List of Tables, continued

Table 8.1	Nativity Profile of the Spanish Origin Group by Place of Residence, United States, 1976	68
Table 8.2	Place of Residence of the Spanish Origin Group by Period of Immigration, United States, 1976	69
Table 8.3	Language Use by Place of Residence and Nativity, Persons of Spanish Mother Tongue, United States, 1976	69
Table 8.4	Nativity Profile by Place of Residence: Persons of Spanish Mother Tongue, Selected SMSAs, United States, 1976	70
Table 8.5	Place of Residence by Period of Immigration, Persons of Spanish Mother Tongue, Four Years of Age and Older, United States, 1976	70
Table 8.6	Language Use of Immigrants: Persons of Spanish Mother Tongue Four Years of Age and Older by Place of Residence, United States, 1976	72
Table 8.7	Language Use of the Native Born: Persons of Spanish Mother Tongue, Four Years Old or More by Place of Residence, United States, 1976	72
Table 9.1	Ethnic Group by Region: Spanish Origin Group, United States, 1976	75
Table 9.2	Ethnic Group by Mother Tongue: Persons of Spanish Origin Group, United States, 1976	76
Table 9.3	Language Use by Ethnic Group: Persons of Spanish Mother Tongue, United States, 1976	78
Table 9.4	Place of Birth by Ethnic Origin: Persons of Spanish Mother Tongue, Principal Hispanic Groups, United States, 1976	78
Table 9.5	Language Use of Immigrants: Persons of Spanish Mother Tongue, Principal Hispanic Groups, United States, 1976	79
Table 9.6	Language Use of Native Born: Persons of Spanish Mother Tongue, Principal Hispanic Groups, United States, 1976	79

List of Tables, continued

Table 10.1	Base Population, Spanish Language Group, United States, 1976	88
Table 10.2	Mean Number of Children by Age Group, Place of Birth, and Knowledge of English, Spanish Language Group, 1980	91
Table 10.3	Mean Family Size by Age of the Mother, Spanish Language Group, 1980	91
Table 10.4	Projected Language Characteristics of Immigrants by Period: Persons Arriving in the United States after 1976, Spanish Mother Tongue, 1976-2001	95
Table 10.5	Projected Language Practice of Native-Born Children Aged 0-4, Spanish Mother Tongue, United States, 1976	96
Table 10.6	Projected Retention of Spanish by Children of English Mother Tongue: United States, 1976-2001	97
Table 10.7	Projected Age and Sex Structure of the Immigrant Population: Persons of Spanish Mother Tongue, United States	97
Table 11.1	Language Shift Parameters Used in the Projected Model	102
Table 11.2	Projected Size of the Spanish Language Group, United States, 1976-2001	102
Table 11.3	Projected Linguistic Structure of the Spanish Language Group, United States, 1976-2001	104
Table 11.4	Projected Percentage of the Spanish Language Group Born in the United States, 1976-2001	104
Table 11.5	Age Structure of the Spanish Language Group, United States, 1976-2001	106
Table 11.6	Projected Characteristics of the Spanish Language Group, 1976-2001, Persons Residing in the United States, 1976	107
Table 11.7	Projected Characteristics of the Spanish Language Group, 1976-2001, Persons Residing in the United States, 1986	107
Table 11.8	Projected Size of the Spanish Language Group, Native Born Population, 1976	108

List of Tables, continued

Table A1.1	Ethnic Origins of the Spanish Language Population, Native Born, United States, 1976, 1980	113
Table A2.1	Five Years Survival Coefficients by Sex, 1976-2001, United States	114
Table A2.2	Annual Projected Births per 1,000 Hispanic Women, United States, 1976-2001	115
Table A2.3	Projected Language Characteristics of Immigrant Women, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001	116
Table A2.4	Projected Language Characteristics of Immigrants by Period, Persons Arriving in the United States from 1965-1969, Persons of Spanish Mother Tongue, 1976-2001	122
Table A2.5	Projected Language Practice of Native-Born Children Aged 0-4, Spanish Mother Tongue, United States, 1981	125
Table A2.6	Population Projections by Age, Sex, Place of Birth, and Language Characteristics, Spanish Language Group, United States, 1981	126

List of Figures

Figure 5.1	Language Shift of Spanish Language Immigrants to the United States, 1950-1976	41
Figure 5.2	Language Shift of Spanish Language Immigrants to the United States, 1975-1976	41
Figure 5.3	Language Shift of Spanish Language Immigrants to the United States, 1970-1974	42
Figure 5.4	Language Shift of Spanish Language Immigrants to the United States, 1965-1969	42
Figure 5.5	Language Shift of Spanish Language Immigrants to the United States, 1960-1964	43
Figure 5.6	Language Shift of Spanish Language Immigrants to the United States, 1950-1959	43
Figure 6.1	Three Models of the Evolution of Language Shift	48
Figure 6.2	Language Shift of the Native Born: Spanish Mother Tongue, USA, 1976	48
Figure 7.1	Language Shift of Spanish Language Immigrants to the USA, California, 1950-1976	57
Figure 7.2	Language Shift of Spanish Language Immigrants to the USA, Texas, 1950-1976	57
Figure 7.3	Language Shift of Spanish Language Immigrants to the USA, Northeast, 1950-1976	58
Figure 7.4	Language Shift of Spanish Language Immigrants to the USA, Illinois, 1950-1976	58
Figure 7.5	Language Shift of Spanish Language Immigrants to the USA, Florida, 1950-1976	59
Figure 7.6	Language Shift of Spanish Language Immigrants to the USA, Other States, 1950-1976	59
Figure 7.7	Language Shift by Native Born in the USA, Texas, 1976	61
Figure 7.8	Language Shift by Native Born in the USA, New Mexico, 1976	61
Figure 7.9	Language Shift by Native Born in the USA, Arizona, 1976	62

List of Figures, continued

Figure 7.10	Language Shift by Native Born in the USA, California, 1976	62
Figure 7.11	Language Shift by Native Born in the USA, Northeast, 1976	63
Figure 7.12	Language Shift by Native Born in the USA, Illinois, 1976	63
Figure 7.13	Language Shift by Native Born in the USA, Colorado, 1976	64
Figure 7.14	Language Shift by Native Born in the USA, Other States, 1976	64
Figure 9.1	Language Shift of Mexican Immigrants to the USA, 1950-1976	80
Figure 9.2	Language Shift of Puerto Rican Migrants to the USA, 1950-1976	80
Figure 9.3	Language Shift of Cuban Immigrants to the USA, 1950-1976	81
Figure 9.4	Language Shift of South American Immigrants to the USA, 1950-1976	81
Figure 9.5	Language Shift of Other Spanish Language Immigrants to the USA, 1950-1976	82
Figure 9.6	Language Shift of Persons of Mexican Ancestry, Native Born, USA, 1976	82
Figure 9.7	Language Shift of Persons of Puerto Rican Ancestry, Born on Mainland, USA, 1976	83

Introduction To the Study

This research report is not a book about U.S. Hispanics in the usual sense of the term, that is, Hispanics considered as an ethnic or ancestry group. Rather, it is a book about the Spanish language in the United States, a subject, not entirely different, which merits a discussion in its own right.

We know, for example, from the 1980 Census that approximately 3.5 million persons who declared Hispanic ancestry also said that they did not speak Spanish in their homes. These people either abandoned the Spanish language themselves or were never taught that language by their parents, who also may never have learned the language from their parents, etc. The study examines the Spanish language group in the United States, its growth through net immigration and natural increase, its decline due to movement to the English language group. Since this latter aspect is so poorly understood, it is the major focus of our research.

The study of the language shift process is not only intrinsically interesting, at least to this researcher; it is also of considerable value. For example, given current levels of Spanish language immigration, one may well ask whether the Spanish language group will increase, remain stable, or decrease in size. To answer that question with any degree of certainty, one would have to take into account not only the traditional demographic variables but also the patterns of language shift peculiar to the Spanish language group. Such an enterprise requires that we identify the salient parameters of the language shift process. Only then can a model be developed which permits us to examine the effect of higher or lower rates of immigration, language shift, and fertility on the projected size and composition of the Spanish language group.

Our analysis begins with a brief introduction to the population dynamics of minority language groups, particularly the process by which one may "emigrate" to the English language group. Two aspects of this process merit our attention. The first appears when a person of Spanish mother tongue causes direct loss to the Spanish language group because he or she ceases to speak Spanish as a frequently used language. The second appears when parents who speak Spanish cause subsequent loss to the group because they fail to transmit Spanish to their English-language children. The study also examines two types of language use in which Spanish is retained as the dominant language: Spanish monolingualism, on the one hand, and a practice in which English is less frequently spoken than Spanish (Spanish bilingualism).

In the second chapter we examine the quality of the principal data sources which shed light on the linguistic experience of U.S. Hispanic immigrants and their children. Since language questions have high saliency for immigrants and their children, data obtained tend to be highly reliable. What is most important, however, is that the language questions administered to members of the U.S. population demonstrate a high level of validity. Unfortunately, given both the poor quality of the language-use question contained in the 1980 Census and the failure of the Bureau to ask a question on mother tongue, the data obtained are useless for our purposes.

After a consideration of alternative sources of data (the July 1975 and November 1979 Current Population Surveys), we concluded that for our purposes the 1976 Survey of Income and Education (SIE) provided both the best set of questions and the largest available sample size. Given the high degree of validity of the SIE language questions for mother tongue, usual language, second language, and language of friendship, we are satisfied that the data presented in this study adequately describe the situation of the Spanish language in the United States.

Having selected our principal data source, we then established the general language characteristics of the Spanish language group. According to the SIE, in 1976 approximately 7 million persons reportedly had learned Spanish as their first language while about 4 million more lived in settings where the Spanish language was present as a second language. Of these 11 million persons, some 7.7 million people spoke Spanish on a daily basis, including 4 million who used it as their usual personal language; the remainder preferred English. Of those who declared that they spoke English more frequently than Spanish, some reported that they nonetheless preferred Spanish as their language of friendship, leading us to fix at approximately 4.5 million the number of people who most actively participated in the Spanish language group. In addition, some 300,000 very young children lived in settings where they most likely were learning Spanish as their principal language, bringing the total size of the predominantly Spanish language population to 4.8 million persons at mid-year 1976.

A brief presentation of the demographic structure of the Spanish language origin group in **Chapter 3** reveals very clearly the inroads which English has made in the Spanish origin group. On the one hand, increasingly large percentages of the young were given English for their mother tongue; on the other, the younger the group, the greater was the observed rate of movement to English. These two factors are not independent; the adoption of English by many parents, both immigrant and native born, leads inexorably to the birth of children of English mother tongue, many of whom may be expected to learn Spanish as a second language. Most of these children did not, however, speak Spanish on a regular basis at the time of the 1976 survey and more will abandon Spanish as they grow older and leave the parental home.

Since the analysis presented in Chapter 3 shows that the contribution of persons of English mother tongue to the Spanish language group is relatively limited, and since the contribution of third language groups is insignificant, the long-term future of the Spanish language depends almost exclusively on the language practices and choices of persons of Spanish mother tongue. **Chapters 4 through 6** explore the structure, the pace, and the extent of the movement to English among persons of Spanish mother tongue. These chapters are central to our analysis, providing the basis upon which demographic projections of the size and structure of the Spanish language group can be established.

Because of the importance of continued immigration to the growth of the Spanish language group, the **fourth chapter** examines the relationship between nativity and language characteristics. The analysis shows that the number of Spanish-speaking immigrants who have come to the United States has increased over time, attaining 1.25 million persons for the most recent period (1975-1979). An analysis of the ethnic and/or national origin composition of Spanish language immigration shows that although the Republic of Mexico has always furnished an important proportion of Hispanic immigrants, Mexican immigrants formed a majority of those who arrived during the 1970s. Central and South American immigrants have also been more heavily represented in recent population movements, increasing the internal heterogeneity of the Spanish language group.

Chapter 5 presents a detailed analysis of the process by which Spanish language immigrants adapt to their English language environment. Age at time of arrival and length of residence in the United States are shown to be crucial variables in the determination of the degree and type of language shift observed among Spanish language immigrants. The younger the immigrant upon arrival in the United States, the more ex-

tensive is his or her movement to English.

In addition, the data show that length of residence is associated with greater language shift to English. The longer the period of residence, the greater the movement. After an initial period of adjustment in which the immigrant learns to speak English, movement to English occurs very rapidly and tapers off after about 10 years of residence. Fifteen years after arrival, further language shift is neither observed nor expected.

In short, the data presented in Chapter 5 do not indicate that hispanophone immigrants resist the learning of English. After approximately 15 years of residence in the United States, more than three-fourths of any given group of immigrants will be speaking English on a regular basis. Further, much language shift is very extensive, particularly among those immigrants who were the youngest (0-9 years of age) at time of arrival. After 15 years of residence, approximately 70 percent have been anglicized, including 10 percent English monolinguals who, to all intents and purposes, have abandoned the use of Spanish. Movement is less extensive but still important among those who arrived in the United States aged 10-14.

The age-specific analysis of the language shift process of the native born which is presented in **Chapter 6** reveals that rates of language shift to English have been accelerating over the past half-century. While less than 30 percent of the oldest age group made English their usual personal language and only 60 percent spoke it on a regular basis, nearly all teenagers spoke English on a regular basis in 1976 and five in eight already had adopted that language as their usual preferred language. In fact, it would appear that anglicization rates have been rising steadily, approximately 4 to 5 percent per decade. Consequently, the process of anglicization will tend more and more to approximate a two-generation model of language shift as the native born, in ever larger numbers, abandon Spanish as their preferred daily language, completing a process begun in the immigrant generation.

In the next three chapters of the book we examine three additional aspects of Spanish in American life, its regional dimension, its urban character, and the influence of ethno-national origins on the language shift process.

The data presented in **Chapter 7** reveal that immigrants settling in most regions of the United States experience a relatively similar language shift process, although rates of language shift appear to be somewhat lower in Texas and in New Mexico. The net effect of these lower rates is inconsequential, since the two regions receive less than 10 percent of all new immigrants, a fact which will lead to a decline in the relative importance of these two regions in the near future. On the other hand, rates of shift are higher in Colorado and in the 40 states which are not traditional areas of Hispanic settlement. The share of immigrants moving into these latter regions appears to be increasing over time, attaining approximately 15 percent for the 1975-1976 period. Thus, changes in immigrant preferences for each region would appear to encourage rates of language shift in the future even higher than those currently observed.

With respect to the native born, Texas and New Mexico once again are characterized by lower than average rates of language shift, while most other regions are characterized by higher than average rates of language shift, notably California and Illinois but also New York and Florida. Since these four regions are now those which attract most new immigrants, changing settlement patterns should also produce higher rates of language shift among the native born in the future.

The data examined make it clear that Spanish cannot survive in any area of the United States in the absence of continued immigration. Language shift among both immigrants and the native born is simply too extensive to ensure the long-term survival of the group in any region of the country, most particularly those which have witnessed the most important increases in the size of the Spanish language group.

Data presented in **Chapter 8** show that the Spanish language group is highly concentrated in a small number of large urban areas, most notably New York and Los Angeles. In spite of such large concentrations, however, both the native born and immigrants are more rapidly anglicized in large urban areas than they are in smaller urban or rural areas. In fact, the rapid growth of the Spanish language community in the Los Angeles area is nonetheless associated with the anglicization of immigrants at rates comparable to those observed in other large cities. Further, rates of language shift are still higher for the native born in Los Angeles than in most other major cities. These findings suggest that neither large numbers nor a continuous flow of new immigrants is sufficient to slow the integration of Hispanics into the English language group.

The data presented in this chapter also have a bearing on the future of the Spanish language group.

Since nearly nine in 10 immigrants settle in the larger cities, Hispanic populations in the non-SMSAs (Standard Metropolitan Statistical Areas) are not being reinforced by the arrival of new immigrants. As a result, the Spanish language will become less important outside the major urban centers as those who currently speak Spanish become English-speaking or, in the case of older persons, die. In the long run the concentration of the Spanish language group in major urban areas will lead to higher rates of language shift..

In **Chapter 9** we examine the relationship between ethno-national origin and the language shift process. The data tend to sustain the popular notion that Mexican immigrants maintain the use of Spanish in greater numbers than do those in other groups. When, however, the data are standardized to control for time of arrival, it would appear that Puerto Ricans are nearly as retentive of Spanish as are Mexican Americans. Cubans, Central and South Americans, and Other Hispanics are less retentive of Spanish. Only minimal differences are observed in rates of language shift among the native-born members of these ethno-national groups.

Chapter 10 presents the principal parameters used in our projection of the size and structure of the Spanish language group. Based in part on data developed by the U.S. Bureau of the Census, our preferred model adopts the middle series of mortality rates prepared by the Bureau, accepts the Bureau's lower series of fertility rates, accords more children to women who do not speak English well, assigns a mother tongue to children born to different types of women, fixes immigration at 250,000 net immigrants per year, adjusts their age structure so that they are somewhat younger than predicted by the Bureau, and develops a variety of age-specific rates of language shift. Alternative hypotheses of lower or higher net immigration, fertility rates, and language shift are also examined.

The results of the modeling process are presented in **Chapter 11**. Given the hypotheses presented in the preferred model, *the Spanish language group may be expected to grow from 8.6 to 16.6 million people by the year 2001*. (Here the reader may wish to take a preliminary look at Table 11.2, on page 102.) At the same time, it will undergo some changes in terms of structure, notably with respect to the aging of the population and the presence of (first-generation) immigrants. Few changes, however, are forecast in terms of the linguistic structure of the group.

Nonetheless, this impressive growth of the Spanish language group masks the fact that 4.4 million persons will have left the group by becoming English monolinguals. Were no such emigrations to occur, the group could be expected to number 21 million persons in the year 2001. Most of these losses occur as bilingual English parents fail to transmit Spanish as a second language to their children or when such children, having received Spanish as a second language, cease to speak it.

The data presented in this chapter also reveal the relative importance of the variables retained for analysis. Variations in future levels of fertility are shown to be of secondary importance while international immigration and language shift play important roles in determining the future size and composition of the Spanish language group. In the absence of continuing high levels of immigration, the anglicization process will stem the growth of the Spanish language group and eventually produce its decline.

Two examples make this abundantly clear, one which projects the future size of the Spanish language group based on the population present in 1976, the other which does so on the basis of the probable structure of the 1986 population. In both cases, the population begins to decline before the end of this century. Further, its age and linguistic structure presage progressively more rapid decline in the century ahead.

Finally, it should be observed that at least half the growth of the Spanish language group will likely occur in two major metropolitan areas, New York and Los Angeles. Although the sample size of the SIE is not sufficiently large to permit a regionalized projection model, it may be expected that the Spanish language population of each of these two major settlement areas should reach 2.5 to 3 million people at the beginning of the 21st century. It is also likely that San Antonio, Chicago, and Miami will be home to smaller but sizeable Spanish language communities in the 500,000 to 1 million population range. More specific projections await the production of a data base adequate to the task.

The study examines the Spanish language group in the United States, its growth through net immigration and natural increase, its decline due to movement to the English language group. Since this latter aspect is so poorly understood, it is the major focus of our research.

Chapter 1

Theory and Method in the Analysis of Language Shift

In many respects this study is a logical outcome of research conducted for the National Center for Education Statistics from 1978 to 1980, research which resulted in the book, *Language Shift in the United States* (1983). The most noteworthy addition is the development of a model for assessing the linguistic integration of immigrants, a discovery which made possible a second new feature of this research, namely the development of a population model for minority language groups.

The Demographic Analysis of Language Groups

The analysis which we shall present in subsequent chapters derives from a coherent conceptual analysis of the nature of subpopulations, specifically those defined in terms of linguistic criteria. The first part of this book examines the structure, the pace, and the extent of anglicization of the Spanish language group. Eventually, the parameters of language shift uncovered in the course of this analysis will be used to develop population projections of the size and composition of the Spanish language group.

As is well known to most students of population processes, the population of a country at some future point in time is a function of the size and composition of the population at some earlier point, suitably adjusted for births, deaths, immigration and emigration. These adjustments normally take the form of age-specific birth, death, immigration, and emigration rates. While the population model can be further refined to take into account ethnic, racial, or regional factors, the general characteristics of the modeling process remain unchanged.

This model can be applied to the Spanish language group with only minor modifications. It is most particularly the notion of migration which requires adjustment, since two types of both immigration and emigration may be defined. The first type consists of the entry into or the leaving of the country whose population is being examined, i.e., crossing an accepted international boundary. The second consists of internal migration between subpopulations. For example, when a person ceases to speak his mother tongue on a regular basis, he leaves (emigrates from) his language group of origin and becomes a member (an immigrant) of the language group to which he now belongs.

It may be observed that this linguistic movement

A Glossary of Terminology

It may be helpful to formally define terms which may not be familiar to all our readers. ***Mother tongue*** is the first language learned and the one spoken as a child.

Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue. Anglicization is a specific form of language transfer, the generic term for linguistic emigration to the English language.

When dealing with the concept of mother tongue, we shall make frequent reference to ***anglophones***, ***hispanophones***, and ***allophones***. These are code words which greatly simplify the text once we have become accustomed to their meaning. Anglophones are persons of English mother tongue, hispanophones are persons of Spanish mother tongue, and allophones are persons of mother tongues other than English or Spanish. Allos comes from the Greek and means "other." ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***

Two further concepts which appear frequently in the text are the ***Spanish language group*** and the ***Spanish origin group***. The former refers only to those persons who practice Spanish as a daily language and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. The latter refers to all persons included in our data sources irrespective of their mother tongues or current language practices. But it must be remembered that persons of Hispanic ancestry who came from English language homes and did not themselves speak Spanish in 1976 have been excluded from this study. They are not, therefore, members of the Spanish origin group (as distinguished from the Hispanic ancestry group) as we have defined it.

need not be accompanied by a change of residence. One or more members of a family or household (or all of them together) may decide to reduce participation in the life of the minority language group and to maximize participation in the English language group. Linguistic emigrants are accordingly defined as those who leave their language group of origin; linguistic immigrants are those who enter another language group.

The relationship between these various aspects of the linguistic population model can be summarized in the following equation,

$$p^1 = p^0 + (b - d) + (i^x - e^x) + (i^y - e^y)$$

where (p^1) is the population at some future point in time, (p^0) is the original population, (b) represents the number of births during the period and (d) the number of deaths. The term (i^x- e^x) represents the net gain (loss) for the linguistic subpopulation resulting from movements across international boundaries, while (i^y- e^y) represents the net gain (loss) due to linguistic exchanges between a minority group and other groups.

This study focuses principally on one aspect of this equation, the term (e^y) which refers to linguistic emigration from the Spanish language group to the English language group. This process, referred to in this report as "anglicization," is examined separately for immigrants and for the native born, leading to the development of a model somewhat more sophisticated than that presented in the preceding equation.

While our concern with language shift may appear arbitrary to some, it is in fact one of the two principal variables affecting the size and composition of the Spanish language group in the future. This is first of all true because the term (i^y) can be generally considered to have a value of zero. That is to say, there is almost no in-migration into the Spanish language group from the English language group (or from other minority language groups). We are not here referring to the numbers of people from English language backgrounds who may learn Spanish. Rather, when we speak of linguistic immigration, we mean, for example, that a person of English mother tongue has adopted the Spanish language as his or her principal language of use. This is a rather stringent test of group membership. What is important to understand, however, is that in terms of this definition, few persons can claim to have become "Spanish-speaking" in the full sense of the term, i.e., as active participants in the daily life of the Spanish language group. A high

degree of bilingualism in Spanish simply does not meet this test.

Since the number of linguistic immigrants into the Spanish language group is nearly always equal to zero, it follows that the value of the term (i^y - e^y) is always negative in the United States. Language minorities always lose more persons through anglicization than they gain from the English language group. Thus, we can safely dispense with the calculation of the (i^y) term.

Obviously, the same cannot be said of the remaining factors in the population equation. In fact, we examine the effects of birth and death rates on the size and composition of the Spanish language group in the final chapter of this study.

The problem of international immigration will be considered extensively throughout this report, particularly in terms of its relationship to the process of language shift. If, for example, the level of international immigration is sufficiently high, a language group may experience absolute numeric growth even though it loses large numbers of its members through anglicization (linguistic emigration). This situation is characteristic of the Spanish language group at the present time.

There is, however, a time lag of some importance between the time of arrival of a group of immigrants in the United States and the development of the outflow pattern to the English language group. Consequently, constantly high levels of immigration will produce extremely rapid growth of the language community in the short term, after which higher levels of anglicization will limit or curtail future growth. Lower levels of international immigration may be insufficient to cover losses to the minority language group caused by mortality and language shift, leading to a decline in the absolute size of the language group.

The Measurement of Linguistic Assimilation

Our preceding discussion has introduced the term anglicization as being synonymous with linguistic emigration. Obviously, the term "emigration" when applied to language practice may be conceived as occupying a continuum. At the one extreme, a language group may be characterized by language retention, a situation previously defined by Fishman et al. (1966) as "language loyalty." In principle, all members of the group continue to speak their mother tongue as their principal language of use throughout their lives. The English language groups in Australia, Canada, England, and the United States approach this ideal type of language retention. Nearly everyone of English mother tongue continues to speak English as his or her principal language of use. Further, this situation is thought by most English-speaking people to be "normal."

At the other extreme, a language group may lose all its members through linguistic assimilation (emigration) to another group. Since in the United States linguistic emigration takes the form of integration into the English language group, we have labelled this phenomenon "anglicization." Anglicization may be considered to be one aspect of what Gordon (1964) has called Anglo-conformity: persons of minority language background flow into the dominant English language group.

Since the polar concepts of retention and anglicization are "ideal types" in the Weberian sense, empirical observations of the language shift process fall somewhere on the continuum defined by these two extremes. The problem which besets the analyst is determining where to draw intermediate lines of language shift. In addition, the analyst of secondary data sources is limited by the number and quality of the language use questions included in the data source retained for analysis.

Several types of language shift are defined in this study. Consider first of all the situation of the native-born child who was given Spanish as his or her first language (mother tongue). Let us further suppose that English is not spoken at home and that the young child is currently monolingual. Such a child inevitably will encounter situations where English is the only language used. The child eventually will attend school, go out to play, watch television, etc. This larger reality leads to some degree of English use.

Consequently, the first type of language shift may be defined as the learning of English. It is neither necessary (nor implied) that this child become English-speaking in the sense of accomplishing a linguistic migration to that group. Rather, we propose that the term "Spanish bilingualism" be applied to the practice whereby a person generally retains the mother tongue as his or her principal language of use but speaks English with some facility, and on a regular basis. That is to say, a person who does not "often" use English will be treated as a "Spanish monolingual," that is, as one who has not undergone any significant

movement to English, while those who speak English "often" will be classified as "Spanish bilinguals."

Once a person attains a relatively high degree of fluency in English, a further choice is possible. He or she may make English the preferred language of use, subordinating Spanish to the status of a "frequently spoken" second language. According to the terminology adopted in this study, such a person has become an "English bilingual," that is, one who is principally English-speaking. The person continues to be a member of the minority language group, speaking Spanish with sufficient frequency to be rightly counted among those who participate actively in the maintenance of that language. Nonetheless, a qualitative change in his linguistic behavior has taken place.

The development of an English bilingual pattern has grave consequences for the future of the minority language group, since children will acquire, as their "natural" language, the language most frequently spoken by their parents. Consequently, children of English bilinguals may be expected to have English for their mother tongue; notwithstanding, they can be expected to develop some facility in the second language of the parents (Spanish). They will not, however, be hispanophones, i.e., persons of Spanish mother tongue.

One further type of language shift also can be conceptualized: a person may cease to speak his or her mother tongue on a regular basis. That is to say, she or he may continue to speak it in very specialized settings (with parents, on Sunday, at baptisms) but with less and less frequency. Some may no longer speak it at all. In any case, such a person may be considered to have effectively abandoned the language group of origin and to have become an "English monolingual."

Both English monolingualism and English bilingualism are forms of anglicization, the former more extreme, the latter less so. Unlike the English bilingual, the English monolingual is completely lost to the Spanish language group from the moment that he or she ceases to speak Spanish on a regular basis. Further, the children of such people will not speak Spanish at all, not even as a second language. Thus, both English monolingual parents and their children are definitively lost to the minority language group, depriving it of both present and future support.

Obviously, the language practices of immigrants can be measured along the same continuum. Most hispanophones arrive in the United States with very limited English language skills. Since very few speak English on a regular basis, nearly all are Spanish monolinguals. Most learn English, and a large number become Spanish bilinguals; of these, some are anglicized although few become English monolinguals (Veltman, 1983).

These four categories of language practice enable us to examine the composition of the Spanish language group. They are not perhaps ideally suited to our task, particularly with respect to the location of the frontiers separating the different classes. For example, the imposition of the term "often" to distinguish between "monolingualism" and "bilingualism" appears somewhat subjective. Similarly, it may be very difficult for some people to determine whether they speak English or Spanish with greater frequency ("usually"). This subject will be treated at greater length in the next chapter where we examine the data sources and the quality of the data to be used in this study.

Having outlined the characteristics of the population model to be developed in this study, having explained the logic of our measures of linguistic emigration, and having provided a brief definition of the principal terms which we shall use, we turn in the next chapter to the examination of the quality of the data to be used in the preparation of our analysis.

Chapter 2

The Size Of the Spanish Origin Group

One of the most important questions which this report addresses concerns the size of the Spanish language group. Most national studies give only the size of the Hispanic ancestry group as a whole and only incidentally touch upon the question of language. However, four studies completed by the United States Bureau of the Census between 1975 and 1980 enable us to define the Spanish origin group for the purposes of this study: the *Current Population Survey of July, 1975*; the *Survey of Income and Education (1976)*; the *Current Population Survey of November, 1979* and the *1980 United States Census* (1 percent sample, type C).

In this chapter we shall present the questions used during each study, discussing the merits of the data assembled by the Census Bureau. Needless to say, harmonizing data derived from four separate studies presents a certain number of difficulties. Consequently, the chapter concludes with a general summary treating the problems of data quality and sample size.

The Current Population Survey July 1975 (CPS 1975)

The first major study of the language characteristics of the American population was conducted by the U.S. Census Bureau for the National Center for Education Statistics during the summer of 1975. A language supplement was added to the July CPS and was designed to pre-test questions which would later be used in the Survey of Income and Education. Five questions designed to assess the size and characteristics of minority language groups were included.

Two questions identified those households in which a minority language was presumably present. The first attempted to ascertain the principal language spoken in the household[1], the second whether another language was also spoken by the members of the household. This question was phrased, "Is any other language spoken by the people who live in this household?"[2]. These questions were important to the Census Bureau because they enabled their interviewers to eliminate English monolingual households from the study before the individual language questions were asked. Consequently, interviewers were authorized to skip the personal language use questions whenever it was determined that English was the only language spoken at home. These questions are important to us, however, for a different reason: they enable the analyst to "find" children who are monolingual in

English but who live in homes where the Spanish language is generally spoken as a second household language.

It is important that the reader note the lack of precision in the question designed to ascertain the presence of a second household language. The question does not require that the second language of the household be "regularly" or "often" spoken, nor that all members of the family speak that language. It could well be that a single member of the family had at some point in time studied Spanish—without necessarily having developed fluency; further, if fluent, the individual may not speak Spanish at home or he may employ it sporadically, irregularly, or occasionally. Under these circumstances, Spanish clearly could not qualify as the second language of the household. In short, the formulation of this question would permit a large number of essentially English monolingual households to be registered as homes where Spanish is spoken as a second household language.

Fortunately, the authors of the CPS 1975 questionnaire were not simply interested in household language characteristics. The questionnaire was also designed to assess the personal language characteristics of the American population. These questions are the source of much more interesting information than those concerned with general household language characteristics, particularly since we can assess current language practice as a function of language background.

As we have shown in the preceding chapter, the presence of a mother tongue question[3] (or a question which obtains similar information) is important for the analyst becaues it permits him or her to assess the extent of language shift. Unfortunately, the 1975 CPS question does not correctly measure the mother tongue of respondents. The interviewer was instructed to ask, "Was a language other than English usually spoken in this person's home when (he/she) was a child?" The words "other than English" encourage the respondent not to report English as a first language even when such a response is entirely appropriate. As a result, many individuals who should have been assigned to the English language group instead were included in the Spanish mother tongue group.

Table 2.1 presents the language origin characteristics of the 6,598 persons selected from the CPS 1975 data tape as belonging to what we have loosely defined as the Spanish origin group. Such individuals either lived in a household where the Spanish language was present or were themselves of Spanish language origin (i.e., as defined by the so-called mother tongue question).

This table reveals the presence of 7.4 million persons of Spanish language origin in the United States in 1975. An additional 2.9 million anglophones (persons of English language origin) lived in homes where Spanish was spoken as one of the two household languages, normally as a second language. Some 221,000 allophones (persons of "other" mother tongues) also belonged to the Spanish language group, either because they themselves spoke Spanish or because they lived in a home where Spanish was present.

With respect to current language practice, the CPS 1975 permits the analyst to define four types of current language practice based upon the combination of answers to the usual language question and to the second language question asked during the survey. The first question was quite direct, "What language does this person usually speak?" The second language question is flawed by the same problem which characterized the household question. Respondents were asked, "Does this person speak another language?"[4] Unfortunately, this latter question has no clear relationship to personal language practice. We have no idea whether the individual speaks the language "all the time," "usually," "sometimes," "on Sunday," "with parents," etc. In fact, we do not even know whether the person actually speaks a second language, or simply enjoys some passive knowledge of the language.

Nonetheless, those respondents who said that they did not speak another language are defined for the purposes of this study as being monolinguals, "English monolinguals" if they declared English as their usual personal language, "Spanish monolinguals" if they volunteered that language as an answer to the usual language question. Those who indicated the presence of a second language were defined as bilinguals, "English bilinguals" if English was selected as their usual language, "Spanish bilinguals" when that language was so declared. The relevant data are presented in Table 2.2.

This table shows that an estimated 2.2 million people (21.5 percent) who were considered to belong in the Spanish origin group did not in fact speak Spanish at the time of the survey. Once these English monolinguals are removed from the group, the size of the population which reportedly speaks Spanish as a first or second language can be shown to be approxi-

Table 2.1

Language Background: Spanish Origin Group, Persons Four Years Old or More, United States, 1975

Language Origins	N	Percent
Spanish	7,452,950	70.4
English	2,916,350	27.5
Other	220,920	2.1
Total	**10,590,220**	**100.0**

Source: CPS 1975

Table 2.2

Current Language Use: Spanish Origin Group, Persons Four Years Old or More, United States, 1975

Current Language Use	N	Percent
English Monolingual	2,288,910	21.5
English Bilingual	4,201,760	39.7
English, Total	6,490,670	61.2
Spanish Bilingual	2,934,000	27.6
Spanish Monolingual	1,186,100	11.2
Spanish, Total	4,120,100	38.8
Total	**10,610,770**	**100.0**

Source: CPS 1975

mately 8.3 million people (10.6 - 2.3 = 8.3 million).

These people in turn can be divided into subgroups according to their language practice. More than 4.2 million people (39.7 percent of the total sample) usually spoke English but retained Spanish as a second language. Consequently, only 38.8 percent of the sample (approximately 4.1 million people) continued to speak Spanish as their usual personal language. And of these, only 1.2 million apparently did not speak English on a regular basis.

The Survey of Income and Education of 1976 (SIE 1976)

The SIE 1976 was designed to respond to a Congressional mandate asking the National Center for Education Statistics to obtain two estimates regarding the number of children living in poverty, state by state, and the number of children in need of bilingual education programs. Accordingly, 51 independent samples were drawn (the 50 states and the District of Columbia) in order to provide accurate estimates at the state level. Interviews were conducted in more than 150,000 households across the United States. Some 16,140 persons were located in the SIE data files who could be defined as belonging to the Spanish language group on the basis of either household or personal language characteristics.

After studying the results from the CPS 1975 questionnaire, the NCES team decided to revise the interview schedule. Three principal corrections were made. First of all, the mother tongue question was made more restrictive by dropping the words "other than English." Respondents were now required to report the language usually spoken in the childhood home. While not clearly addressing the language practice of the child, the language usually spoken at home during childhood normally should coincide with the mother tongue of children. This formulation represents a notable improvement on the CPS 1975 question. The data obtained using this revised question are presented in Table 2.3.

Generally, the data strongly resemble those obtained by the CPS 1975 questions, except that total population size fell by more than 500,000 persons when compared to the 1975 data (Table 2.1). There are approximately 400,000 fewer hispanophones (persons of Spanish mother tongue) and 100,000 fewer allophones (persons of "other" mother tongues).

These differences are best explained by the movement of persons between the different mother tongue groups as a result of the changes introduced in the definition of the question. Evidently, approximately 400,000 persons who would have been classified as being of Spanish mother tongue in 1975 were declared in 1976 as being of English mother tongue. This change was brought about by the requirement that Spanish be the language most frequently spoken in the childhood home and not simply the "other language" which was present.

If 400,000 persons have been shifted from Spanish to English mother tongue, then an equal number of anglophones must have disappeared from the 1976 data set because the total number of anglophones remains unchanged. The "disappearance" of 400,000 anglophones is explained by the second principal revision of the 1975 questions, that requiring that a second language (household and individual) be "often" spoken[5]. While the word "often" remains subject to interpretation, it clearly excludes casual, occasional, and irregular use of a language. Consequently, a language could no longer be declared a second language if it were not spoken with some regularity.

This more stringent requirement, designed to assess the number of persons who actually use a minority language with some frequency, eliminated from the language sample those households where the Spanish language was infrequently, irregularly, or seldom used. Thus, the 400,000 anglophones absent from the 1976 SIE lived in homes which were considered "bilingual" in 1975 but no longer met the criterion for household bilingualism in 1976. Spanish was not spoken with sufficient frequency ("often") to qualify as a second household language. A similar consideration likely reduced by more than one-half the number of allophones present in the Spanish language group.

The general correspondence of the two data sets is nonetheless quite surprising in view of the results which we obtained for the French language group (Veltman, 1987). The imposition of the more adequate SIE standards reduced the total size of the French language group from 3.5 million (CPS 1975) to just over 2 million in 1976. The relatively minor differences observed for the Spanish language group suggest that there are not as yet a large number of households where the use of the minority language is exceedingly tentative. When Spanish is reported as a second language, even in response to a question of dubious quality, it appears much more likely to be used on a regular basis than is French.

Finally, several questions were added to the SIE questionnaire which were not included in 1975. On the one hand, use and knowledge of English were explored more fully; on the other, several other dimensions of language practice were added, notably a question which ascertained the language of friendship[6]. In our study on the future of French in the United States, we took the position that the language of friendship is an indicator of such importance that it should take precedence over the usual language question when defining current language practice (Veltman, 1987). That is to say, it may well be that some persons speak more English than Spanish on a daily basis, largely because they choose (or are obliged) to work in English. However, in areas of social life totally under their control, they clearly have chosen Spanish as their principal personal language. Consequently, we shall define a fifth language shift category for persons who normally speak English but who prefer Spanish as their language of friendship. Later on, we shall integrate such persons into the Spanish bilingual group.

The relevant data on the language practice of persons in the Spanish language group are presented in Table 2.4. Once again, they strongly resemble those obtained by the CPS 1975. The study reveals the presence of 2.3 million English monolinguals (more than 20 percent of the total sample) living in contact with the Spanish language on a daily basis or having themselves come from Spanish language homes. The exclusion of English monolinguals leaves approximately 7.7 million persons who frequently speak Spanish, either as their usual personal language or as a second language "often" spoken. This figure is approximately 600,000 below that obtained using the CPS 1975 questions, a fact largely explained by the exclusion of persons who may in fact speak Spanish from time to time, on an irregular or infrequent basis (as defined in the CPS 1975) but who clearly do not speak it "often" (as defined in 1976). In particular, the number of English bilinguals declines from 4.2 to 3.8 million, a decline largely explained by the absence of the 400,000 anglophones whose homes no longer qualify as bilingual.

It is, nonetheless, interesting to observe that nearly 600,000 English bilinguals continue to use Spanish as their preferred language of friendship, a new finding which suggests that the impact of English may not be as great as suggested in our previous work on the Spanish language group (Veltman, 1983). Given their preference for Spanish in the private realm, such persons continue to participate actively in the Spanish language group and will most likely, other things being equal, give birth to children of Spanish mother tongue.

One other change produced by the more rigorous SIE 1976 definition of bilingualism merits comment. While only 15 percent of the Spanish language group does not speak English on a frequent basis, the number of such persons rises from 1.2 to approximately 1.6 million as a result of the modification of the questionnaire. This suggests that in addition to 1.2 million people who really do not speak English well (from Table 2.2), another 400,000 people think that they speak English (reasonably) well but do not in fact do so on a regular basis (i.e., "often").

In general, however, a comparison of the 1975 CPS and the 1976 SIE leads us to conclude that these two studies offer essentially the same portrait of the Spanish language group. Both studies fix the total size of the group at just over 10 million people and the number of people who speak Spanish at 7.7 to 8.3 million people, depending on the questions asked.

Given the fact that the SIE question better reflects the concept of mother tongue, that its second language question requires the regular use of another language, and that it contains a larger number of language questions than the CPS 1975, this latter data base can be excluded from further consideration in the course of our research. In addition, the SIE sample consists of data for 16,140 persons as opposed to 6,598 in the 1975 CPS[7]. For reasons of both quality and quantity, the SIE 1976 is clearly a superior source of data.

The Current Population Survey November 1979 (CPS 1979)

The third source of data relevant to our project comes from a supplement to the November 1979 CPS. Two language questions were presented to respondents, one dealing with the so-called mother tongue of the individual, a second with current language practice. Both are markedly inferior in quality to those previously examined[8].

Let us consider first of all the question designed to obtain the language of childhood. The so-called "mother tongue" question is a repeat performance of the disastrous question asked in the 1970 national census. The interviewer posed the following question to respondents: "Was a language other than English

Table 2.3

**Mother Tongue of the Spanish Origin Group:
Persons Four Years Old or More,
United States, 1976**

Mother Tongue	N	Percent
Spanish	7,039,730	70.0
English	2,910,990	29.0
Other	95,520	1.0
Total	**10,046,240**	**100.0**

Source: SIE 1976

Table 2.4

**Current Language Use:
Persons Four Years Old or More, Spanish Origin Group,
United States, 1976**

Current Language Use	N	Percent
English Monolingual	2,307,390	23.0
English Bilingual	3,208,490	31.9
English, Total	5,515,880	54.9
Mixed Practice*	592,930	5.9
Spanish Bilingual	2,377,820	23.7
Spanish Monolingual	1,559,690	15.5
Spanish, Total	3,937,510	39.2
Total	**10,046,320**	**100.0**

* Mixed Practice: English usual language and Spanish as language of friendship
Source: SIE 1976

spoken in this person's home when he/she was a child?" Not only does this question suffer from the difficulties which we have already noted for the CPS 1975 question; it no longer requires that such a language have been "usually" spoken in the childhood home. Any language, other than English, which the respondent may have heard spoken in his home could be (and was) reported as a so-called mother tongue.

The decision to use this question is still more surprising in view of the fact that the U.S. Census Bureau itself has clearly demonstrated its inadequacies. According to a study designed to assess the accuracy of selected census questions, the Bureau found that less than one-half of those who selected a non-English language in response to the 1970 Census question could be considered to have had a minority language for their mother tongue[9]. Considering the evidence which the Census Bureau marshalled against this question, it is extremely difficult to understand why they used it in the CPS 1979.

Furthermore, the Bureau recognized the seriousness of the problem in its report on the November 1979 survey when it wrote: "An individual may never have learned to speak his or her mother tongue..."[10] One may be forgiven for wondering how the Census Bureau defines mother tongue. Clearly, it has little to do with the common understanding of that term[11].

The data produced by this question are presented in Table 2.5 and reveal, as may have been expected, a dramatic increase in the number of persons coming from homes where the Spanish language was spoken to some extent. The number of persons reporting the presence of Spanish under such conditions rises to 9.3 million persons while the number of anglophones plunges to approximately 550,000 persons. The poor quality of this question causes a shift of approximately 2.2 to 2.3 million anglophones into what the Census so casually calls the "Spanish mother tongue" group. Nonetheless, the CPS 1979 does confirm the previous findings regarding the general size of the population living in contact with Spanish, i.e., approximately 10 million people.

The second language question included in the CPS 1979 attempts to define the language usually spoken by respondents. Once again, the question is biased by the presence of the words "other than English." The interviewer asked the respondent, "Does this person speak a language other than English at home?" This question does not require that the language be spoken either "usually" or "often." Nonetheless, the addition of the words "at home" tends to exclude people who might know how to speak Spanish but who do not do so at home, i.e., on a regular basis. Table 2.6 reveals that an estimated 8.7 million people reported that they spoke Spanish at home in response to this question, a figure 1 million higher than that obtained in the 1976 SIE.

The larger number of Spanish-speaking persons found in the CPS 1979 requires two comments. First of all, this figure probably represents the upper limit on the size of the population that speaks Spanish regularly. Obviously, most people who belong to the Spanish language group use this language a good deal (i.e., "often" as defined in the SIE), but up to 1 million more may employ it irregularly or occasionally. This estimate is based upon a direct comparison of the 1976 and the 1979 data.

However, the number of Spanish-speaking immigrants who arrived in the United States between 1976 and 1979 may have caused an increase during that period in the total number of persons who "often" speak Spanish. The data will later show that approximately 600,000 to 700,000 new immigrants arrived during that period. However, the anglicization process also continued to take its toll, so that it is unlikely that the total size of the population "often" speaking Spanish increased by 600,000 to 700,000 persons. Further, that part of the Spanish language group most likely to use Spanish on a regular basis, i.e., older persons, is also affected by higher mortality rates. Suffice it to say, at least for the moment, that the SIE estimate of 7.7 million persons who often speak Spanish should probably be revised upward to somewhere between 8.0 and 8.2 million people to fit the 1979 time frame. This correction reduces the gap between the two studies to some 500,000 to 700,000 persons. This group is characterized by the "regular" use of Spanish although that language is not "often" spoken.

The 1980 United States Census (1980 Census)

If the CPS 1979 is considerably inferior to the previous studies conducted by the Bureau of the Census, the national census of 1980 is of still less value for our purposes. Only one question was asked of the 20-percent national subsample which received the long-form questionnaire, the same one used in the CPS 1979 to obtain information on the language usually spoken.

In our recent study on the status of French in the

Table 2.5

Language Background of the Spanish Origin Group: Persons Four Years Old or More*, United States, 1979

Language Origins	N	Percent
Spanish	9,382,732	93.5
English	533,244	5.3
Other	115,038	1.2
Total	**10,031,014**	**100.0**

* Children 4-13 were distributed to language groups in the same proportions as those found for the older age groups.
Source: CPS 1979

Table 2.6

Current Language Use: Spanish Origin Group, Persons Four Years Old or More, United States, 1979

Current Language Use	N	Percent
Spanish	8,771,107	87.4
English	1,233,499	12.3
Other	26,408	0.3
Total	**10,031,014**	**100.0**

Source: CPS 1979

Table 2.7

Number of Persons Responding «Spanish» to the Language Questions Appearing in Four National Surveys, United States, 1980

Source	Question	Number Responding Spanish
	Language Origin	
CPS 1975	Was a language other than English usually spoken in (this person's) home when (he/she) was a child ?	7,452,950
SIE 1976	What language was usually spoken in (this person's) home when (he/she) was a child?	7,039,750
CPS 1979	Was a language other than English spoken in (this person's) home when (he/she) was a child?	9,252,665
	Usual Language	
CPS 1975	What language does (this person) usually speak ?	4,111,640
SIE 1976	What language does (this person) usually speak ?	3,937,510
CPS 1979	Does (this person) speak a language other than English at home ?	8,769,367
Census 1980	Does (this person) speak another language at home ?	11,662,000
	Second Language	
CPS 1975	Does (this person) speak another language ?	4,204,740
SIE 1976	Does (this person) speak another language often ?	3,801,330
	Total Size of the Spanish Language Community	
CPS 1975		8,316,380
SIE 1976		7,738,840
CPS 1979		8,769,367
CENSUS 1980		11,662,000

United States (Veltman, 1987), we observed that more than 1.5 million persons claimed to speak French at home in response to the 1980 census question, whereas the same question had produced only 900,000 such persons during the CPS 1979. A similar effect is observed in the present case. More than 11.6 million persons said that they speak Spanish at home in 1980, whereas the 1979 study had found only 8.7 million.

Normally, the national census is considered to have greater validity than sample surveys. However, given the fact that three previous studies completed during the same general time period fix the size of the total population having contact with Spanish at approximately 10 million people and the total number of people speaking Spanish at 7.7 to 8.7 million, the analyst must call into question the validity of the national census figures.

It appears that the method chosen to administer the questionnaire in 1980 played an important role in determining the size of the population reportedly speaking Spanish at home. When the survey interviewer approached the respondent in his home in 1979 and asked the usual language question, the respondent heard the words "at home" and tended to respond in terms of the language each individual actually spoke in the household. However, when the census questionnaire is read in the privacy of the home, the emphasis tends to shift away from actual practice to the knowledge of a second language, that is, a relatively passive type of language practice.

This proposition can be tested relatively easily. We compiled for both the CPS 1979 and the Census 1980 studies the number of cases where only a single person in a household with at least two members claimed to speak Spanish at home. Such cases accounted for 11.1 percent of all persons supposedly speaking Spanish at home in the 1980 Census but only 5.8 percent in the CPS 1979. This finding suggests that the method of administration led additional people to declare Spanish as a language which they spoke at home—even if they had no one in the home with whom they might converse in Spanish.

Further, the 1980 Census file for persons of Spanish language contains approximately 3.5 times more native-born persons of non-Hispanic ancestry than does the 1976 SIE (Appendix 1). When using ethnic origin as a selection criterion, the vast majority of the persons found in the SIE reported that they were of Spanish, Mexican, Puerto Rican, Cuban or Other Latin American origins. This figure declined markedly in the 1980 Census. It would appear, then, that a considerable number of anglophones declared that they regularly spoke Spanish at home, a conclusion that we find totally untenable.

We must, therefore, consider the data produced by the SIE 1976 as best reflecting the current status of Spanish in the United States. Questions which are not as rigorously drawn as those in SIE 1976 tend to add anglophones to the Spanish language sample, normally persons either monolingual in English or nearly so. We have already observed that such a situation occurred in 1975 and probably in 1979. One may, therefore, conclude with some certainty that most of the additional people "found" by the 1980 Census probably are not hispanophones and do not participate in any active way in the Spanish language community.

Summary

To facilitate the interpretation of the data which we have presented in this chapter, a summary table of the questions asked and the number of persons declaring Spanish as a response is presented in Table 2.7.

Considering first of all the questions designed to ascertain the language spoken in the child's home, the CPS 1979 question is the weakest since it attempts to exclude English as a legitimate answer and seeks to elicit a minority language instead. It appears then, that approximately 9.3 million persons grew up in a setting where Spanish was at least occasionally used. For approximately 2 million persons, that use appears to have been quite irregular, since the CPS 1975 permits us to ascertain that only 7.4 million persons grew up in homes where Spanish was "usually" spoken. Most of these latter homes were characterized by the predominance of Spanish, the SIE 1976 revealing that 7 million persons likely had Spanish for their mother tongue.

With respect to current language use, it appears that the 1980 Census produced data which is significantly out-of-step with that obtained from other studies. It is difficult to determine what these data mean but they clearly indicate either an infrequent use of Spanish or some passive understanding of the language. A more frequent use would have been captured in the CPS 1979 which is, after all, a random sample of 6,455 cases and which fixes the upper limits of the relatively regular practice of Spanish at 8.7 million persons. Although the SIE 1976 found some 7.7 million people who spoke Spanish on a daily basis, a preliminary analysis suggests that this latter figure likely reached

8.0 to 8.2 million by the end of 1979, reducing the number of those who spoke Spanish at home but not "often" to some 500,000 to 700,000 persons.

The SIE 1976 and the CPS 1975 permit us, however, to draw a further distinction between those who usually speak English and those who normally speak Spanish. According to both studies, approximately 4 million people continued to speak Spanish as their usual personal language while 3.8 million usually spoke English. As we have seen, however, some 600,000 persons in this latter group continued to prefer Spanish as their language of friendship, a figure which permits us to fix at approximately 4.5 million the number of people who most actively participate in the Spanish language group. This figure may also be revised upward in the course of a more complete demographic analysis. (See Chapter 11.)

The General Quality of Language Data

Previous studies by the U.S. Census Bureau reveal language characteristics to be among the most reliable indicators used in questionnaires (Census, 1974; Census, 1975). Furthermore, even when using a notoriously poor question such as the CPS 1979 language origin question, the data reveal greater reliability in the case of the Spanish language group than that observed for other minority language groups. This is undoubtedly true because the vast majority of Hispanics are relatively recent arrivals in the United States. Since language questions have high saliency for immigrants and their children, we can be well assured that the language characteristics reported in this study adequately reflect the structure and the rates of language shift in the Spanish language group.

It is not, however, satisfactory to accept every indicator proposed by the Census Bureau as representing some aspect of "Gospel truth" that the analyst cannot afford to ignore. This is clearly the case with reference to the so-called "mother tongue" question used in the 1970 Census, and the so-called "usual language" question in the 1980 Census. These are extremely poor questions and they render the data obtained useless for our purposes. As a result, this study will rely almost entirely on data developed in the 1976 Survey of Income and Education.

We shall nonetheless explore at a later point the methods which would permit us to use at least some of the data from the 1979 CPS and the 1980 Census. For example, the CPS 1979 is the sole source of data on the place of birth of the parents of the native born, while the 1980 Census is the only source of fertility data useful to our study. The use of such data requires, however, the development of methods to eliminate persons who really do not belong to the Spanish language group, particularly in the case of the 1980 Census (see Appendix 1).

Notes:

1. "What language is usually spoken by the people who live in this household?"
2. If the answer to the question was "Yes," the interviewer then asked, "What other language do the people in this household speak?"
3. For example, "What language did this person first speak when he/she was a child?"
4. The specific language was then determined.
5. Does this person often speak another language?
6. "What language does this person usually speak to his/her best friends?"
7. Since the general accuracy of a sample is determined as a function of the square-root of total sample size, the SIE data are approximately 1.56 times more accurate than the CPS 1975 data.
8. How does one explain such a dramatic decline in quality over such a short time-span? Did the U.S. Bureau of the Census learn nothing from its cooperation with the NCES team?
9. See tables E and F on page 10 in Accuracy of Data for Selected Population Characteristics as Measured by the 1970 CPS-Census Match, publication no. PHC(E)-11. Washington: Bureau of the Census, U.S. Department of Commerce, 1975.
10. Ancestry and Language in the United States: November, 1979, Current Population Reports, Special Studies, Series P-3, no. 116. Washington: Bureau of the Census, U.S. Department of Commerce, 1982.
11. For a fuller discussion of this issue, see Veltman, 1983, pages 3 to 7. Since the poor quality of the CPS 1979 forces us to make little use of this data base in the course of this project, further discussion of this point does not seem useful.

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 3

The Structure Of the Spanish Origin Group

While it is important to understand the general characteristics of the Spanish origin group, it is still more important to examine the demographic structure of the group, notably with respect to age. This is true for two reasons: first of all, the Spanish origin group is relatively young; second, as we have noted in Chapter 1, patterns of language origin and language shift are associated with age.

This chapter begins with two tables presenting the language characteristics of the Spanish origin group as a function of age. Language practice is then examined as a function of mother tongue. Finally, the language practice of each age group is described for persons of English, Spanish, and other mother tongues.

English and Spanish as Mother Tongues: The Spanish Origin Population

The evolution of mother tongues is not without interest for the future of the Spanish origin group. As we have previously observed, children of English mother tongue are born into the Spanish origin group as a result of the anglicization of their parents. The presence of persons of English mother tongue is, therefore, a logical outcome of the anglicization process. The evolution of mother tongues in the Spanish origin group is presented in Table 3.1.

This table shows first of all that 70 percent of those in the Spanish origin group had Spanish as their first language. However, fully 29 percent were reported to have learned English as first language, i.e., as mother tongue. Further, the role of English increases markedly as a function of time. Only 9.2 percent of the oldest persons came from English language homes as opposed to 51.5 percent of the 10-14 year olds. The figures are marginally lower for the younger children. Nonetheless, the table clearly reveals that the percentage of persons of English mother tongue is increasing over time; correspondingly, the percentage of hispanophones is decreasing.

At this point, we should remember that the Census Bureau did not ascertain the mother tongue of children aged 0-13. Consequently, the analyst is forced to impute a first language to these children. The simplest method consists of assigning as mother tongue the language usually spoken in the parental home (principal household language). However, it is likely that the declaration of a household language may change over time; particularly when the young child goes off to school and brings English into the household. Since

children wish to be "like everybody else," they may attempt to impose English as a conversational language in the home, an attempt not necessarily reproved by parents who are themselves involved in the learning of English. What once was a Spanish language household (as defined by principal household language) may become an English language home, particularly as the children reach early adolescence.

As a result, it is highly probable that children aged 4-13 are even more likely to have had Spanish as mother tongue than is suggested by Table 3.1. Since this is unlikely to have been the case among preschoolers, one may safely conclude that the correct percentage of Spanish mother tongue children for 4-14 year olds ranges between 55.9 percent (observed for the 0-4s) and 60.5 percent, the figure observed for 15-19 year olds[1]. This line of thought suggests that some 200,000 to 300,000 children may have been incorrectly assigned English as mother tongue, a function of changing patterns of language use within the family as the children bring English home from educational and recreational activities.

Table 3.1 also presents a dramatic image of the increasing size of the Spanish origin group. Both the 0-9 and 10-19 age groups contain about 2.4 million persons and the 20-29 age group, 2.0 million; each older cohort is successively smaller. It should be noted, however, that these figures contain both anglophones and hispanophones, including some persons who are monolingual in English. This table does not, therefore, provide an in-depth portrait of the actual language characteristics of the Spanish origin group.

Spanish and English As Daily Languages

Table 3.2 presents the language practice of persons in the Spanish origin group. No data are presented for children under four years of age since none were collected by the Census. Speaking generally, the data reveal that a majority of persons usually speak English (54.9 percent), including a relatively large proportion of people, 23.0 percent, who do not speak Spanish at all (i.e., as a frequently used, daily language). Another 5.9 percent usually speak English but maintain that they normally speak Spanish to their friends, while 39.2 percent report that Spanish is their preferred personal language. Most of these latter also speak English on a daily basis.

As may have been expected from the analysis presented in the preceding section, the younger the individual, the more likely it is that he or she will be predominantly English-speaking. While over 70 percent of the oldest age group normally speak Spanish, only 20.2 percent of the 10-14 year olds do so. And while the figure is higher among the 4-9 year olds, it must be remembered that these children have just begun their formal education. Within a very short period of time, they too will undergo greater movement to English, developing a language use profile similar to that of their older peers. This observation forces us to conclude that the Spanish origin group is becoming more and more English-speaking over time. Each succeeding cohort is more likely to speak English than its predecessor, a finding associated with the declining presence of Spanish monolingualism and a marked increase in English monolingualism.

The Relationship between Mother Tongue and Maintenance of Spanish

It is likely, of course, that the presence of English as mother tongue is associated with decreased use of Spanish on a daily basis. Conversely, persons of Spanish mother tongue are more likely to use Spanish. Table 3.3 permits us to examine the general relationship between mother tongue and language practice.

If we define anglicization as the movement from the language of early childhood (measured by mother tongue) to the predominant use of English, this table reveals that 37.7 percent of the individuals of Spanish mother tongue have crossed that line. Most have not entirely abandoned the Spanish language but continue to use it as a frequently spoken but subordinate language (30.3 percent). Nonetheless, some 7.4 percent have become English monolinguals, no longer speaking Spanish on a regular basis.

In addition, most of those who usually speak Spanish, either as their daily language or their language of friendship, also speak English quite extensively. Only 21.6 percent of the hispanophones present in the SIE reportedly did not speak English on a regular basis.

With respect to anglophones present in the sample, the data reveal that only 2.5 percent were reported to usually speak Spanish. An additional 1.7 percent used Spanish as their preferred language of friendship. Nonetheless, the data presented in this table lead to one clear conclusion: *giving English to*

Table 3.1

Mother Tongue by Age Group: Spanish Origin Group, United States, 1976

Age Group	Mother Tongue				
	English (%)	Spanish (%)	Other (%)	Total (%)	N
0 - 4	42.2	55.9	1.9	100.0	967,050
5 - 9	50.0	49.9	0.1	100.0	1,468,370
10-14	51.5	48.4	0.1	100.0	1,298,650
15-19	39.3	60.5	0.2	100.0	1,124,030
20-29	24.9	74.3	0.8	100.0	1,980,640
30-39	17.1	81.6	1.3	100.0	1,517,760
40-49	13.2	85.4	1.4	100.0	1,167,780
50-59	10.3	88.2	1.5	100.0	742,170
60-69	12.5	84.1	3.4	100.0	441,590
70 / +	9.2	86.7	4.1	100.0	307,120
Total	**29.0**	**70.0**	**1.0**	**100.0**	**11,015,180**

Source: SIE 1976

Table 3.2

Language Use by Age Group: Spanish Origin Group, Persons Four Years Old or More, United States, 1976

Age Group	English Usual Language			Spanish Usual Language				
	Monolingual (%)	Bilingual (%)	Total (%)	Mixed* (%)	Bilingual (%)	Monolingual (%)	Total (%)	N
4 - 9	28.2	38.4	66.6	2.1	23.6	7.7	31.3	1,473,880
10-14	32.0	45.8	77.8	2.0	17.6	2.6	20.2	1,306,060
15-19	29.5	42.9	72.4	2.5	18.7	6.4	25.1	1,130,730
20-29	22.1	32.3	54.4	7.3	22.7	15.6	38.3	1,985,820
30-39	18.6	26.0	44.6	9.9	27.0	18.5	45.5	1,520,680
40-49	17.0	22.7	39.7	10.3	28.6	21.4	50.0	1,173,250
50-59	16.9	23.7	40.6	7.0	25.9	26.5	52.4	744,810
60-69	17.2	12.1	29.3	6.0	28.8	35.8	64.6	443,930
70 / +	10.9	13.4	24.3	5.2	24.3	46.2	70.5	307,120
Total	**23.0**	**31.9**	**54.9**	**5.9**	**23.7**	**15.5**	**39.2**	**10,086,280**

*Mixed: English usual language and Spanish, language of friendship
Source: SIE 1976

one's children for their mother tongue generally leads to the abandonment of Spanish. Approximately 60 percent of the anglophones present in the survey do not speak Spanish on a regular basis. In short, although these people live in daily contact with Spanish, they are not members of the Spanish language group. They do not participate in Spanish language conversations on a regular basis—if at all.

The situation is similar for persons from other language backgrounds, although a higher percentage of such individuals use Spanish as their principal personal language (13.8 percent). Most frequently, however, English monolingualism is the outcome. In any case, the number of allophones present in the survey is too small to make any serious impact on the future of the Spanish language group.

Taken as a whole, Table 3.3 suggests that the future of the Spanish language group will be largely determined by people of Spanish mother tongue. While anglophones will continue to contribute a relatively large number of English bilinguals to the Spanish language group, most persons of English mother tongue will be lost to the group. Even should some succeed in maintaining an English bilingual pattern into the next generation, the data suggest that 60 percent of their children would be lost to the group. Generally, English bilingualism must be viewed as a transitional state leading to English monolingualism, either in the current generation or in the next[2].

Language Practice by Age Group And Mother Tongue

In the next three tables we shall examine in greater detail the relationship between age and language practice, controlling for mother tongue. To facilitate the analysis we have integrated the group previously defined as having "mixed" language practice into the Spanish bilingual group. This choice is deliberately conservative and tends to minimize the extent of language shift to English[3].

Table 3.4 examines language practice by age for persons of Spanish mother tongue. As previous tables have shown, the younger the individual, the more extensive the movement to English. The only exceptions to this rule are the very youngest children, some of whom have not as yet entered school. Some 15 percent are still monolingual in Spanish, a figure three times higher than that found for 10-14 year olds. In any case, many children have not had the time necessary to develop their English language skills to the point where they could adopt English as their usual personal language.

Further examination reveals that most persons of Spanish mother tongue remain within the Spanish language group. There is virtually no change in the rates of English monolingualism from one age group to another. What has changed, however, is the way in which Spanish is used: Spanish increasingly is subordinated to English. This table reveals a rapid decline in Spanish monolingualism and a rapid rise in English bilingualism. Consequently, among the younger adults, only one-fifth do not speak English on a regular basis, compared to more than 50 percent of persons at least 70 years of age. Similarly, the total anglicization rate advances from 14.5 percent in the latter group to 40.7 percent among the 20-29 year olds.

The higher anglicization rates observed among the young deserve three comments. First of all, the calculated rates are not as high as they should be, since 200,000 to 300,000 of the most anglicized young people, i.e., those living in households characterized by the presence of English as principal home language, have likely been misclassified as anglophones. Since nearly all of them usually speak English, the true rate of anglicization probably exceeded 65 percent at the time of the survey.

In addition, this higher rate may be expected to increase still further as children become increasingly detached from the parental home. At the very least, some children will be freed from settings where Spanish language use is imposed by the parents, permitting them to declare that they use English more frequently than they do Spanish. On the other hand, the current group of 4-19 year olds likely contains many more native-born persons than it will ten years from now. Not all of the new arrivals who will be added to these groups will be exposed as extensively to English language institutions as are the native born, leading to less language shift for the group as a whole.

Given the fact that these forces operate in conflicting directions, it is difficult to predict, from the data presented in this table, the final levels of both Spanish monolingualism and language shift to English. However, given the historical trends which appear to be at work, it would seem most unlikely that Spanish monolingualism would exceed the 20 percent observed for 20-29 year olds, or that the total anglicization rate would drop below 45-50 percent once these children come to maturity and complete the language shift

process.

Table 3.5 permits us to inspect more closely the age structure of language practice among anglophones. One of the most interesting features of this table concerns the age structure of the English language group itself. Nearly half is composed of children aged 4-14 years old, i.e., children living in homes where English is usually spoken. As we pointed out, approximately 200,000 to 300,000 are undoubtedly of Spanish mother tongue. Nonetheless, the anglicization rates for both younger age groups are nearly 97 percent. Only the rate of English monolingualism is somewhat lower than expected, a function perhaps of the presence of these additional hispanophones.

Equally interesting is the structure of the anglophone population which has made a language shift to Spanish. Only 4.2 percent of the entire English language population normally speaks Spanish, and the phenomenon is largely confined to the small group of persons aged 40 and over in 1976. Movement to Spanish from the English mother tongue group appears, therefore, to be a thing of the past.

One further conclusion appears warranted. The exclusion of approximately 250,000 4-14 year olds from the anglophone group would yield an estimated rate of English monolingualism of approximately 65 percent among those children left in the group[4]. This figure should perhaps be considered as the minimum rate of English monolingualism among children of English mother tongue.

It should be observed, however, that these children will disappear from future language surveys as they grow older since English monolinguals of English mother tongue cannot be captured using linguistic criteria. Only those who happen to select a partner who is of Spanish mother tongue or language practice would be included in the Spanish origin group using the same criteria as those employed in 1976.

Given the unlikely prospect that all (or even most) monolingual anglophones would choose for a partner someone who still speaks Spanish, it is quite likely that the total size of the 4-14 year old age group will diminish sharply as these children move out of their childhood homes. As a result, the rates of English bilingualism should be expected to rise sharply as these English monolingual children leave Spanish language settings. Nonetheless, when we examine the language use characteristics of persons aged 20 and over, the data reveal that approximately 60 percent of the persons of English mother tongue do not speak Spanish on any regular basis. This equilibrium can be maintained only if a large number of English bilinguals become English monolinguals over the course of time, a process which would maintain the 60 percent figure while the total size of the anglophone group decreases.

This observation leads to another important conclusion. While we have previously estimated that 65 percent of the children of English mother tongue eventually will become monolingual in English, this estimate was based solely on the observed patterns present among 4-14 year olds in the survey sample. This figure is similar to that obtained for the adults of English mother tongue present in the study. However, the argument developed in the previous paragraph suggests that a significant number of similar adults are missing from the study, simply because they no longer live in Spanish language homes. Since these persons cannot be located, we have no clear way to calculate a definitive rate of English monolingualism. It is, however, likely to be much higher than the 65 percent previously estimated, probably in the neighborhood of 75 to 90 percent[5].

Table 3.6 permits us to observe that persons who come to the Spanish language group from a third language background are usually adults. Few children are present, suggesting that these allophones are largely immigrants to the United States. They learned their Spanish in Latin America but most now speak English. Undoubtedly, their children were given English for their mother tongue. The evolution of language practice by age group is generally irregular because the sample sizes have become so small. In any case, we may safely conclude that allophones make no important contribution to the consolidation of the Spanish language group.

Conclusion

This brief presentation of the demographic structure of the Spanish origin group suggests several important conclusions. On the one hand, we find increasingly large percentages of the population having English for a mother tongue; on the other, we encounter rising rates of movement to English as the age of the population decreases. These two factors are not independent: the movement to English as one's preferred language leads inexorably to the birth of children of English mother tongue. As we have shown, at least 65 percent of these children will be monolin-

Table 3.3

Language Use by Mother Tongue: Spanish Origin Group, Persons Four Years Old or More, United States, 1976

Language Use	Mother Tongue Spanish (%)	English (%)	Other (%)	Total (%)
English Usual Language :				
Monolingual	7.4	59.6	55.6	23.0
Bilingual	30.3	36.2	27.1	31.9
Subtotal	37.7	95.8	82.7	54.9
Mixed Practice *	7.6	1.7	3.5	6.0
Spanish Usual Language :				
Bilingual	33.1	1.2	11.5	23.6
Monolingual	21.6	1.3	2.3	15.5
Subtotal	54.7	2.5	13.8	39.1
Total (%)	100.0	100.0	100.0	100.0
(N)	7,039,750	2,911,050	95,520	10,046,320

* Mixed Practice: English usual language and Spanish, language of friendship
Source : SIE 1976

Table 3.4

Language Use by Age Group: Spanish Mother Tongue, Persons Four Years Old or More, United States, 1976

Age Group	English Usual Language Monolingual (%)	Bilingual (%)	Total (%)	Spanish Usual Language Bilingual* (%)	Monolingual (%)	Total (%)	N
4 - 9	1.9	34.5	36.4	48.3	15.3	63.6	732,280
10 -14	5.2	52.3	57.5	37.4	5.1	42.5	628,410
15 -19	6.3	49.8	56.1	34.5	9.4	43.9	680,200
20 -29	9.5	31.2	40.7	38.9	20.4	59.3	1,472,410
30 -39	7.5	25.4	32.9	44.6	22.5	67.1	1,239,300
40 -49	8.8	21.8	30.6	45.1	24.3	69.4	997,340
50 -59	9.6	24.5	34.1	36.0	29.9	65.9	654,240
60 -69	7.6	10.1	17.7	40.6	41.7	82.3	371,240
70 / +	6.5	8.0	14.5	32.7	52.8	85.5	266,240
Total	**7.4**	**30.3**	**37.7**	**40.7**	**21.6**	**62.3**	**7,041,660**

* Includes mixed language practice
Source: SIE 1976

Table 3.5

Language Use by Age Group: English Mother Tongue, Persons Four Years Old or More, United States, 1976

	English Usual Language			Spanish Usual Language			
Age Group	Monolingual (%)	Bilingual (%)	Total (%)	Bilingual* (%)	Monolingual (%)	Total (%)	N
4 - 9	54.4	42.5	96.9	3.1	0.0	3.1	734,550
10 -14	57.0	39.9	96.9	2.9	0.2	3.1	668,960
15 -19	64.8	32.3	97.1	1.0	1.9	2.9	442,030
20 -29	58.0	36.2	94.2	4.1	1.7	5.8	492,570
30 -39	68.3	27.9	96.2	2.6	1.2	3.8	259,510
40 -49	64.7	25.9	90.6	3.5	5.9	9.4	154,470
50 -59	72.8	18.4	91.2	6.0	2.8	8.8	76,080
60 -69	65.5	22.1	87.6	4.1	8.3	12.4	55,540
70 / +	50.7	44.2	94.9	0.6	4.5	5.1	28,330
Total	**59.6**	**36.2**	**95.8**	**2.9**	**1.3**	**4.2**	**2,912,040**

* Includes mixed language practice
Source: SIE 1976

Table 3.6

Language Use by Age Group: Other Mother Tongue, Persons Four Years Old or More, United States, 1976

	English Usual Language			Spanish Usual Language			
Age Group	Monolingual (%)	Bilingual (%)	Total (%)	Bilingual* (%)	Monolingual (%)	Total (%)	N
4 - 9	100.0	0.0	100.0	0.0	0.0	0.0	1,600
10 - 14	100.0	0.0	100.0	0.0	0.0	0.0	1,290
15 - 19	43.0	57.0	100.0	0.0	0.0	0.0	1,830
20 - 29	56.5	16.0	72.5	15.0	12.5	27.5	16,050
30 - 39	59.8	34.4	94.2	5.8	0.0	5.8	19,240
40 - 49	59.6	34.2	93.8	6.2	0.0	6.2	16,070
50 - 59	49.7	8.5	58.2	40.0	1.8	41.8	11,860
60 - 69	75.7	12.1	87.8	12.2	0.0	12.2	15,020
70 / +	53.6	32.2	85.8	14.2	0.0	14.2	12,560
Total	**55.6**	**27.1**	**82.7**	**15.0**	**2.3**	**17.3**	**95,520**

* Includes mixed language practice
Source: SIE 1976

gual in English; more probably, the figure will attain 75 percent to 90 percent.

Since the contribution of third language groups is insignificant, the long-term future of the Spanish language depends almost exclusively on the language practices and choices of persons of Spanish mother tongue. The data analysis reveals that at least 40 percent of the younger adults have adopted English as their preferred language of use. Further, it would appear that there is a long term, persistent increase in the rate of movement to English, although not in the rate of outright abandonment of the Spanish language.

Given the importance of continued immigration to the growth of the Spanish language group, the next chapter examines the relationship between nativity and language characteristics.

Notes:

1. The data for 15-19 year olds are derived from the mother tongue question.
2. The problem of intergenerational transmission of Spanish is directly examined in Veltman, 1983, Chapter 4.
3. This follows the practice we developed in our study of the future of French in the United States, but differs from that used in our previous examination of language shift, where we opted for the principal language of use as the best indicator of anglicization (Veltman, 1983).
4. Assuming that approximately 10 percent of those children of Spanish mother tongue were already monolingual in English, a figure somewhat higher than that observed in the previous table.
5. Given the lower levels of immigration in the French language group, attempts to estimate the rate of English monolingualism met with less difficulty. It appears that approximately 90 percent of persons of English mother tongue raised in French language homes eventually became English monolinguals (Veltman, 1987).

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 4

Nativity Profile of The Spanish Origin Group

When beginning an analysis of a topic as controversial as that of Hispanic immigration to the United States, one is reminded that sometimes "fools rush in where angels fear to tread." This is a subject which arouses passion in the United States, partly because people do not know the facts, partly because there is little way to obtain accurate information, and partly because nativist prejudice against immigrant groups is a characteristic feature of American life.

Our research here is not concerned with the distinction between legal and illegal immigration. It does require, however, minimal reliability with respect to place of birth (U.S. or foreign) and, in the case of immigrants, time of arrival in the United States. Broadly viewed, the process of learning and adopting English should not vary according to the legal status of Spanish language immigrants; consequently, a detailed analysis of this problem is not essential to our task.

In the hierarchy of questions to which respondents can provide consistent answers, language questions figure among the best (Veltman, 1983, Chapter 1). Generally speaking, the same is true for place of birth since one generally knows the country in which one was born; even those who are not particularly proud of their country of birth nonetheless treat the question as a request for factual information. There is no compelling reason to believe that persons of Spanish origin are likely to lie about their place of birth, unless of course they are illegal immigrants and would face deportation if discovered. And in such cases, it is more likely that such persons would lie about their citizenship status rather than place of birth; citizens are rarely deported, irrespective of their national origins. Further, one could claim to be Puerto Rican, an assertion which would allay concerns of citizenship while at the same time explaining one's accent and appearance.

In any case, we can accept a good deal of misinformation (lying) regarding place of birth. Perhaps illegal immigration is indeed much higher than previously estimated by INS (the U.S. Immigration and Naturalization Service) because so many foreign-born Hispanics have claimed in the Census (and other surveys) that they are native born. What is more important from our point of view is whether the data set before us can be interpreted within a consistent framework—whether the data present a believable portrait of the language shift process of any minority language group.

We begin our analysis by examining what we shall call the nativity profile of the Spanish language group.

Two separate variables are collapsed into one in order to facilitate our analysis: birthplace (U.S./abroad) and the time period during which the foreign born settled in the United States. While this chapter examines the nativity profile of the Spanish language population in a preliminary way, the next two chapters will develop our analysis in a much more detailed manner.

Place of Birth and Time of Arrival

Table 4.1 presents in summary form the data obtained from the four principal surveys produced by the United States Census between 1975 and 1980. While all researchers would like to have data from four separate sources which display exactly the same characteristics, such is not the case in the studies examined in Table 4.1. Nonetheless, two essential patterns are visible in this table. First of all, the total size of the foreign-born population continued to grow between 1975 and 1980, reaching nearly 5 million persons in 1980. Secondly, while the total number of persons admitted to the United States during the 1950s was on the order of 60,000 per year, this figure rises constantly over time. The latest data fix annual hispanophone immigration at approximately 250,000 persons per year.

The same data show that the number of native-born persons belonging to the Spanish language group has also continued to grow, a function of the fact that increased immigration levels subsequently lead to a higher number of native Americans born to immigrant parents after their arrival in the United States. As we have observed in Chapter 2, the sharp increase in the number of native born as reported by the 1980 Census is simply not believable. It is more likely attributable to the extremely poor quality of the language question asked by the Bureau of the Census.

In order to get a better idea of the origins of Spanish language immigrants (as declared during the sample surveys), Table 4.2 presents data concerning both place of birth and time of arrival in the United States. Such data are not available for Puerto Ricans from the 1980 Census since the Bureau does not require U.S. citizens to report their time of arrival on the mainland. This decision is unfortunate for our purposes since the language shift process of Puerto Ricans is undoubtedly related to their length of residence in the continental United States. These data were obtained from the 1976 SIE, and an extrapolation was made to the 1980 time frame[1].

According to this table, approximately a third of pre-1950 immigrants were born in Puerto Rico while nearly half were born in Mexico. During the 1950s these proportions changed, Mexicans coming to represent the single largest group of Hispanic immigrants. Cuban immigration was much more important during the 1960s than either previously or later, while immigration from South America increased to approximately 10 percent of the total, a figure which has remained relatively constant. On the whole, Puerto Rican immigration has tended to remain relatively constant at 10-15 percent. Since the beginning of the 1970s, however, immigration from the Mexican republic has accounted for more than half of all hispanophone immigration, a pattern which appears to have continued during the first half of the 1980s[2].

Generally speaking, the United States Census has never collected much data on the origins of the native-born population. It is therefore rather difficult to develop data based on any indicator other than ethnic origin, an indicator which has proved to be relatively unreliable (Johnson, 1975). Fortunately, the 1979 CPS provides data on both the birthplace of the respondent and on those of his or her parents. The relevant data for the 5.7 million native-born persons of the Spanish language group are presented in Table 4.3.

First of all, these data reveal that nearly 3.0 million persons, over one-half of all the native born, were born to parents both of whom were themselves born in the United States. The next largest number were born to immigrants from the Mexican republic, followed by those coming to the mainland from Puerto Rico. These three origins account for nearly three-fourths of the native-born children present in the 1979 survey.

With respect to persons of mixed ancestry, one parent having been born in the United States and the other in a foreign country, the single pattern which stands out concerns children having one Mexican-born and one U.S.-born parent. When interpreted from the viewpoint of the parents, these data suggest that nearly 1 in 3 Mexican immigrants contracted a relationship with a U.S.-born partner. Similar patterns are observed among South Americans and Central Americans, notably the latter, but not for Puerto Ricans and Cubans, where relationships with native-born U.S. persons are much less frequent. Evidently parents in these groups contracted endogamous relationships prior to their arrival in the United States, whereas those in remaining groups were more likely to arrive as individuals and select a partner after their arrival.

Table 4.1

Period of Immigration of the Spanish Origin Group, 1975-1980, United States

Period of Immigration	Source of the Data: CPS 1975		SIE 1976		CPS 1979*		Census 1980*	
Native Born	**7,682,643**	**72.0 %**	**6,296,451**	**62.7 %**	**5,833,736**	**58.3 %**	**6,977,900**	**58.9 %**
Immigrants	**2,985,188**	**28.0%**	**3,752,446**	**37.3%**	**4,169,308**	**41.7%**	**4,864,100**	**41.1%**
Before 1950	428,895	4.0	532,993	5.3	415,831	4.2	449,960	3.8
1950 - 1959	597,156	5.6	689,682	6.9	423,287	4.2	652,890	5.5
1960 - 1964	539,554	5.1	521,473	5.2	499,397	5.0	592,370	5.0
1965 - 1969	726,758	6.8	815,339	8.1	763,280	7.6	824,270	7.0
1970 - 1975	692,825	6.5	975,013	9.7	1,019,435	10.2	1,064,730	9.0
1976 - 1980	------	0.0	217,946	2.1	1,048,078	10.5	1,279,880	10.8

* Estimated values (see text)

Table 4.2

Place of Birth by Period of Immigration: Spanish Origin Group, United States, 1980

Period of Immigration	Place of Birth: Mexico (%)	Puerto Rico (%)	South America (%)	Central America (%)	Cuba (%)	Other (%)	Total Percent	N
Before 1950	46.8	33.4	1.3	2.8	3.5	12.2	100.0	449,960
1950 - 1959	32.6	45.1	4.0	3.0	8.3	7.0	100.0	652,890
1960 - 1964	32.4	14.8	10.9	4.6	26.9	10.4	100.0	592,370
1965 - 1969	33.9	13.9	9.9	5.6	23.6	13.1	100.0	824,270
1970 - 1974	50.1	10.6	10.2	6.9	11.5	10.7	100.0	1,064,730
1975 - 1980	53.4	13.1	9.5	9.7	3.4	10.9	100.0	1,279,880
Total	**43.4**	**19.1**	**8.4**	**6.2**	**12.1**	**10.8**	**100.0**	**4,864,100**

Source: Census 1980

Table 4.3

Parental Place of Birth for Native-Born Members of the Spanish Origin Group: Persons Four Years Old or More, 1979

Parental place of birth	N	Percent
Both parents born in:		
United States	2,964,138	51.7
Mexico	871,270	15.3
Puerto Rico	436,956	7.6
South America	39,138	0.7
Central America	19,173	0.3
Cuba	110,618	1.9
Other, same country	107,421	1.9
Sub-total	**4,548,714**	**79.4**
One parent native born, the other born in:		
Mexico	709,227	12.4
Puerto Rico	78,029	1.4
South America	25,247	0.4
Central America	26,874	0.4
Cuba	33,162	0.6
Other	127,115	2.2
Sub-total	**999,654**	**17.4**
Parents born in different foreign countries:	**181,409**	**3.2**
Total	**5,729,777**	**100.0**

Source: CPS 1979

Language Characteristics and Nativity

In order to examine the language characteristics of the Spanish language group, we turn once again to the 1976 SIE as the most pertinent source of data. The first table we shall present examines the mother tongue of the Spanish language group according to place of birth and time of arrival (Table 4.4). This table makes abundantly clear what everyone should know: *a bare majority of the native-born children were given Spanish as their first language, while approximately 95 percent of the immigrant population had Spanish for their mother tongue*. That some persons of English and other mother tongues should be found in the immigrant population seems somewhat surprising. This feature seems best explained by the presence of marriages between Hispanic and non-Hispanic immigrants.

The three succeeding tables permit us to examine the language characteristics of the three different mother tongue groups as a function of their nativity characteristics. Table 4.5 presents data for persons of Spanish mother tongue and shows the extensive anglicization of the native born. More than 90 percent spoke English on a regular basis and 52.0 percent of the native-born hispanophones usually spoke English, i.e., as their personal, preferred language. On the other hand, only 11.2 percent had abandoned the use of Spanish as a daily language.

With respect to the foreign born, the data show that the longer the length of residence in the United States, the more extensive is the adoption of the English language. The rate of Spanish monolingualism drops consistently as length of stay rises, falling from 69.6 percent among the most recent arrivals to less than one-fourth of each group that arrived prior to 1965. Further, this movement toward the adoption of English as a language used regularly occurs very rapidly, i.e., within approximately 10 years after arrival in the United States. *Three out of four immigrants appear to abandon the exclusive use of Spanish within a ten-year period*. This does not simply mean that they have "learned English," but rather that they have come to speak that language on a regular basis.

The adoption of English as one's principal language of use also occurs very rapidly. Although only 6.6 percent of the most recent arrivals (1975-1976) usually spoke English as their principal language, it should not be forgotten that they had lived in the United States for an average of only nine months[3]. After approximately four years of residence, 14.7 percent of the immigrants who arrived from 1970-1974 had been anglicized; after nine years (1965-1969), the figure reaches 21.1 percent; after 14 years (1960-1964 arrivals), it exceeds 30 percent. Rates of English monolingualism, while generally very low, also rise as a function of length of residence.

One can already conclude from this table that Hispanics are not resisting the learning of English; rather, the movement to English appears to be both rapid and extensive. Even on the basis of this first approach to an assessment of the language shift process, these data simply do not support the conclusion that hispanophones do not learn (and adopt) English.

Turning to the patterns of language behavior observed among anglophones in the Spanish language group, the data reveal that 61 percent of the native born do not speak Spanish (Table 4.6). This figure resembles that previously presented for the entire population, since the native born comprise such an important part of the total. And while the total percentage of anglophone immigrants who usually speak English remains exceedingly high, the rates of English monolingualism are markedly lower than that obtained for the native born. This finding lends some credence to the suggestion that these people may have come from rather particular backgrounds.

Similar data are presented in Table 4.7 for the allophone language groups and show the extensive presence of English monolingualism among the native born. Although the sample sizes are small[4], it would appear that rates of English monolingualism are somewhat higher than those observed in the previous table, a finding which supports our previous conclusion that the presence of allophone immigrants in the Spanish language group can be largely ignored.

Conclusion

Although our data analysis has been relatively rapid in this chapter, it has served several important functions. First of all, we have established the general numbers of Spanish-speaking immigrants who come to the United States, and we have examined their ethnic and national origins. The predominance of the Mexican component and its increased importance in recent times clearly comes to the fore.

Further, the analysis underlines the importance of both nativity and time-of-arrival variables as central factors in the explanation of language shift. Hispanophone immigrants undergo rapid language shift to

Table 4.4

Mother Tongue by Period of Immigration:
Spanish Language Group, United States, 1976

Period of Immigration	Mother Tongue				N
	English (%)	Spanish (%)	Other (%)	Total (%)	
Native Born	**44.0**	**55.4**	**0.6**	**100.0**	**6,296,480**
Immigrants:	**3.7**	**94.6**	**1.7**	**100.0**	**3,752,440**
Before 1950	3.0	93.4	3.5	100.0	532,990
1950 - 1959	2.3	96.2	1.5	100.0	689,680
1960 - 1964	2.9	94.5	2.6	100.0	521,470
1965 - 1969	5.5	94.4	0.1	100.0	815,340
1970 - 1976	4.1	94.5	1.4	100.0	1,192,960
Total	**29.0**	**70.1**	**1.4**	**100.0**	**10,048,920**

Source: SIE 1976

Table 4.5

Language Use by Period of Immigration, Spanish Mother Tongue:
Persons Four Years Old or More, United States, 1976

Period of Immigration	English Usual Language			Spanish Usual Language			N
	Monolingual (%)	Bilingual (%)	Total (%)	Bilingual (%)	Monolingual (%)	Total (%)	
Native born	**11.2**	**40.8**	**52.0**	**39.7**	**8.3**	**48.0**	**3,489,320**
Immigrants	**3.6**	**19.9**	**23.5**	**42.6**	**33.9**	**76.5**	**3,552,300**
Before 1950	9.0	25.1	34.1	42.2	23.7	65.9	498,050
1950 - 1959	5.3	24.8	30.1	48.5	21.4	69.9	663,270
1960 - 1964	4.5	27.1	31.6	45.7	22.7	68.4	492,940
1965 - 1969	2.0	19.1	21.1	40.8	38.1	78.9	770,100
1970 - 1974	0.9	13.8	14.7	39.8	45.5	85.3	919,630
1975 - 1976	0.8	5.8	6.6	23.8	69.6	93.4	208,310
Total	**7.4**	**30.3**	**37.7**	**40.7**	**21.6**	**62.3**	**7,041,620**

Source: SIE 1976

Table 4.6

Language Use by Period of Immigration, English Mother Tongue:
Persons Four Years Old or More, United States, 1976

Period of Immigration	English Usual Language			Spanish Usual Language			N
	Monolingual (%)	Bilingual (%)	Total (%)	Bilingual (%)	Monolingual (%)	Total (%)	
Native born	**61.0**	**35.0**	**96.0**	**2.7**	**1.3**	**4.0**	**2,771,660**
Immigrants:	**31.8**	**57.9**	**89.7**	**8.2**	**2.1**	**10.3**	**140,150**
Before 1950	38.6	28.0	66.6	33.4	0.0	33.4	16,160
1950 - 1959	34.4	45.5	79.9	16.6	3.5	20.1	15,930
1960 - 1964	37.3	59.2	96.5	1.9	1.6	3.5	15,050
1965 - 1969	30.0	68.9	98.9	1.1	0.0	1.1	44,460
1970 - 1974	28.1	63.9	92.0	4.4	3.6	8.0	43,210
1975 - 1976	34.1	40.8	74.9	15.9	9.2	25.1	5,360
Total	**59.6**	**36.1**	**95.7**	**2.9**	**1.4**	**4.3**	**2,911,810**

Source: SIE 1976

Table 4.7

Language Use by Period of Immigration, Other Mother Tongue:
Persons Four Years Old or More, United States, 1976

Period of Immigration	English Usual Language			Spanish Usual Language			N
	Monolingual (%)	Bilingual (%)	Total (%)	Bilingual (%)	Monolingual (%)	Total (%)	
Native born	**78.0**	**13.3**	**91.3**	**8.7**	**0.0**	**8.7**	**35,500**
Immigrants:	**42.3**	**35.2**	**77.5**	**18.8**	**3.7**	**22.5**	**60,020**
Before 1950	35.0	46.3	81.3	17.5	1.2	18.7	18,790
1950 - 1959	38.4	40.7	79.1	20.9	0.0	20.9	10,500
1960 - 1964	45.8	29.0	74.8	25.2	0.0	25.2	13,480
1965 - 1969	56.9	43.1	100.0	0.0	0.0	0.0	780
1970 - 1974	38.5	27.4	65.9	19.7	14.4	34.1	12,190
1975 - 1976	80.9	13.5	94.4	0.0	5.6	5.6	4,280
Total	**55.6**	**27.1**	**82.7**	**15.0**	**2.3**	**17.3**	**95,520**

Source: SIE 1976

English, a process which is at least partly explained by length of residence in the United States. The more extensive anglicization of the native born serves simply to underline this fact. The adoption of English by many parents, both immigrant and native born alike, leads in turn to the birth of anglophone children, i.e., children of English mother tongue. Most of these children did not, at the time of the survey, speak Spanish on a regular basis and, as we have seen in the preceding chapter, more will abandon Spanish as they grow older and leave the parental home.

The data presented in this chapter sustain a coherent theory of language shift. Still more important, they make it quite clear that we could accept a relatively large proportion of lying with respect to place of birth. Were a large number of the (declared) native born actually born in a foreign country, we would then find that the rates of anglicization calculated for those "really" born in the United States would be much higher than they currently are. This is likely to be the case since those falsely declaring native birth may be presumed to have language characteristics similar to immigrants who properly declared their place of birth. Consequently, we should expect to find relatively similar rates of language shift for the foreign born and higher rates of anglicization for the native born.

The conclusion to be drawn from this discussion is obvious: fewer native-born persons would give birth to children of Spanish mother tongue in the third generation or to anglophones who would also speak Spanish. The acceptance at face value (as declared) of the nativity data represent, therefore, a conservative approach to the study of language shift. The "real" rates of language shift of the native born may in fact be higher than those calculated, an observation which does not disturb our analysis in any manner. The observed rates are sufficiently high that they leave no doubt as to the long-term consequences for the Spanish language.

In the next two chapters, in developing a temporal framework of language shift, we shall present a more detailed analysis of this process. Both chapters will ignore the anglophone and allophone components of the Spanish language group and will focus only on persons of Spanish mother tongue. Chapter 5 examines the process for the foreign born as a function of age at time of arrival and length of residence in the United States. Chapter 6 examines language shift among the native born as a function of chronological age.

Notes:

1. Data for the 1975-1980 period were estimated by subtracting the total number of Puerto Rican immigrants arriving before 1975 from the total number of persons born in Puerto Rico according to the 1980 Census.
2. Data were furnished for the 1980 to 1984 period by Robert Warren, Statistics Branch, United States Immigration and Naturalization Service.
3. The survey was conducted during the months of April to June, 1976. Since the period from January 1975 to June 1976 includes 18 months, the average length of stay most probably did not exceed nine months.
4. The small sample sizes undoubtedly account for much of the fluctuation in the rates of language shift presented in this table.

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 5

Language Shift Among Immigrants

While patterns of language shift are relatively well understood for the native born, no comprehensive account of this process has been produced for immigrants, although several relevant variables have been suggested, notably the age of the immigrant at time of arrival (Veltman, 1987) and length of residence in the host country (Veltman, 1983). This chapter proposes to examine the language shift of Spanish language immigrants to the United States as a function of these two factors.

Methodology

Data were obtained for all sampled persons of Spanish mother tongue who were not born in the United States[1]. Their age at the time of arrival was calculated exactly for those who came during the 1970s and was estimated for those arriving prior to that time. Those who arrived between 1960 and 1964 were considered to have arrived in the mid-point year of 1962; similarly, immigrants during the 1965-1969 period were assigned to 1967 as their year of arrival. This procedure generates greater inaccuracy when applied to those who arrived during 1950-1959; all were assigned to 1955 as their year of arrival. Since we cannot estimate the time of arrival of persons who immigrated before 1950, they were excluded from the analysis. The final raw sample retained for analysis included 3,455 cases.

With respect to the method employed to analyze the language shift process of immigrants, the model developed in this chapter entails the suspension of one of the cardinal rules of data analysis, namely that longitudinal inferences cannot be made on the basis of cross-sectional data. Our approach requires the construction of an uncontaminated measure of the length of time during which a given group of Spanish language immigrants has resided in the United States. Period of arrival data can be used to derive such an indicator only if the following two hypotheses can be provisionally accepted: (a) all relevant characteristics (age, sex, national origin, previous knowledge of English, etc.) of immigrants arriving in each period are considered identical, and (b) all such immigrants undergo a language shift process which is invariant over time. In view of the relatively short period covered by the analysis, it is unlikely that the process of language learning and shift would have been greatly modified over time, leading us to generally accept the second hypothesis.

As far as the first hypothesis is concerned, it would be satisfactory if differences between sex or national origin groups were found to be rather small, or if they diverged in predictable ways from the general pattern of language shift derived for the language group as a whole. As we shall see later in this book, such is the case for both variables. National origin is discussed in Chapter 9, sex differences in Chapter 10. Since it would seem unlikely that a large number of Spanish language immigrants should already speak English on a regular basis (i.e. "often") prior to their arrival in the United States, the hypothesis of linguistic similarity between immigrants arriving in different periods also can be accepted.

Ages of Hispanophone Immigrants

Table 5.1 presents the age at time of arrival of the estimated 3 million Spanish language immigrants on which our analysis is based. The summary column reveals that nearly a third of the Spanish language immigrants came to the United States in their middle and late teens or their early twenties. More than 20 percent arrive before the age of 10 and less than 20 percent after the age of 35. Furthermore, the observed pattern is relatively constant over time, except that the percentage of older immigrants is somewhat higher during the most recent periods[2]. In general, however, these data show sufficient similarity between periods to justify the longitudinal interpretation which we shall apply to the data presented in the remainder of this chapter.

Language Shift for Immigrant Hispanophones

The relationship between age at time of arrival and language-use patterns is presented for the entire immigrant population in Figure 5.1. The blackened space designates English monolingualism, while that which remains white depicts the presence of Spanish monolingualism. The space between the upper and the middle curves (dotted area) indicates the presence of Spanish bilingualism, while that between the middle and lower curves (grey area) identifies English bilingualism. We should also note that anglicization, defined as the adoption of English as one's usual personal language, is represented by the totality of the grey and black areas. Similarly, the area beneath the upper curve (the entire non-white area) defines the proportion of each age group which speaks English on a regular basis—whether as a usual personal language

Table 5.1

Age at Time of Arrival by Period of Entry: Immigrants of Spanish Mother Tongue, United States, 1976

Age at Time-of-Arrival	Period of Entry 1950-1959 (%)	1960-1969 (%)	1970-1976 (%)	Total (%)
0-4	12.1	11.0	10.4	11.0
5-9	10.4	10.2	11.1	10.6
10-14	13.4	11.1	8.9	10.8
15-24	33.7	27.2	32.3	30.5
25-34	18.9	20.0	18.4	19.2
35-44	8.4	11.4	10.1	9.9
45 +	3.1	9.1	9.8	8.0
Total	100.0	100.0	100.0	100.0
(N)	663,275	1,263,078	1,127,953	3,054,306

Source: SIE 1976

or as a second language.

The data show a clear relationship between age at time of arrival and language shift to English. The younger the person at time of arrival, the more extensive the shift to English. Little Spanish monolingualism is observed for those who arrived as young children, and more than half of such immigrants had made English their usual personal language. While over 80 percent of those who arrived when aged 10-14 use English on a regular basis, less than 30 percent have made it their preferred personal language. While few differences were observed in the anglicization rates of age groups who were at least 15 years of age at time of arrival, the use of English on a regular basis declined regularly as age at time of arrival increased. More than 70 percent of those aged 45 or more did not speak English "often" and very few had made English their usual personal language.

If this figure confirms the association between age at time of arrival and the propensity to use English on a regular basis or as a preferred language, the rate at which such transformations occur remains to be explored. To examine this aspect of the problem, we shall successively present the language use patterns of immigrants who arrived in each of the time periods for which we possess data.

Figure 5.2 presents the language use patterns of the most recent immigrants to the United States, those arriving in 1975 or 1976. The period of U.S. residence varies from several days to not more than 18 months[3]. Although English monolingualism does not as yet play a role in the language practice of such recent immigrants, the data reveal that the language shift of the young was already rather extensive. In spite of the fact that the youngest children are unlikely to have many contacts outside the home, 30 percent already spoke English on a regular basis; the figure reaches 70 percent for those aged 5-9 at time of arrival and 60 percent for those aged 10-14. Somewhat less than 30 percent of the 15-34 year olds already had begun using English, on a regular basis, although very few of the older immigrants did so. And while the height of the estimated curve of anglicization for the 10-14 year olds is surely exaggerated, the data suggest that some of the children already were using English as their principal personal language—this within 18 months of their arrival in the United States.

Figure 5.3 presents similar data for immigrants who arrived between 1970 and 1974. The length of residence varies accordingly from 1.5 to 6.5 years. Once again the age structure plays an important role in the learning and use of English. Three-fourths to seven-eighths of all those who were 0-14 years of age on arrival spoke English on a regular basis, and approximately 30 percent of those who were 0-9 had adopted English as their preferred personal language. The figure is roughly 20 percent for those who were 10-14 years old at time of arrival. On the other hand, more than half of those who were at least 15 years old when they arrived did not speak English on a regular basis, and few had been anglicized.

Figure 5.4 presents data for the 1965-1969 time period, i.e., for immigrants residing in the United States from 6.5 to 11.5 years. Except in the oldest age group, approximately half of those who were 15 to 44 years old when they arrived spoke English on a regular basis. Nonetheless, the data show relatively few changes in the anglicization rates for these older age groups. However, notable changes in the use of English are observed for the younger age groups. Approximately 60 percent of those aged 0-9 years at time of arrival had been anglicized, and nearly all spoke English on a regular basis.

Figure 5.5 presents data for those who arrived between 1960 and 1964, 11.5 to 16.5 years prior to the survey. The data reveal a general decline in Spanish monolingualism among the older adults, compared to the data presented above, associated with an increase in the anglicization rate to approximately 20 percent, double that observed in Figure 5.4. Although the anglicization rate is somewhat higher among the younger groups, the most notable change concerns the development of English monolingualism by approximately 10 percent of those in the three youngest groups.

Figure 5.6 presents similar data for those arriving in the 1950s, 16.5 to 26.5 years prior to the survey. Generally speaking, Figure 5.6 is a carbon copy of Figure 5.5[4], a finding which tends to confirm the proposition that virtually no additional language shift occurs after some 15 years of residence in the United States. Rather, differential rates of mortality will cause the rates of English monolingualism and English bilingualism to increase after that time, the older members of any given immigrant cohort being those more likely to employ Spanish as their usual preferred language.

Figure 5.1
Language Shift of Spanish Language Immigrants to the United States, 1950-1976

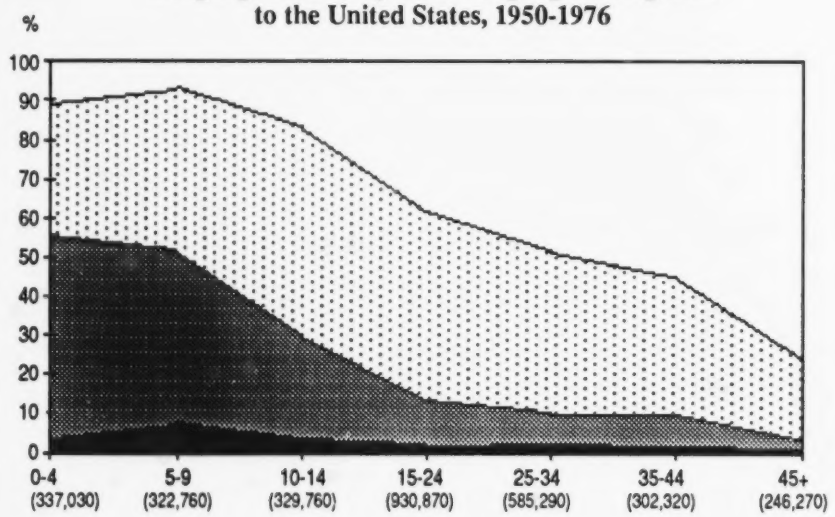
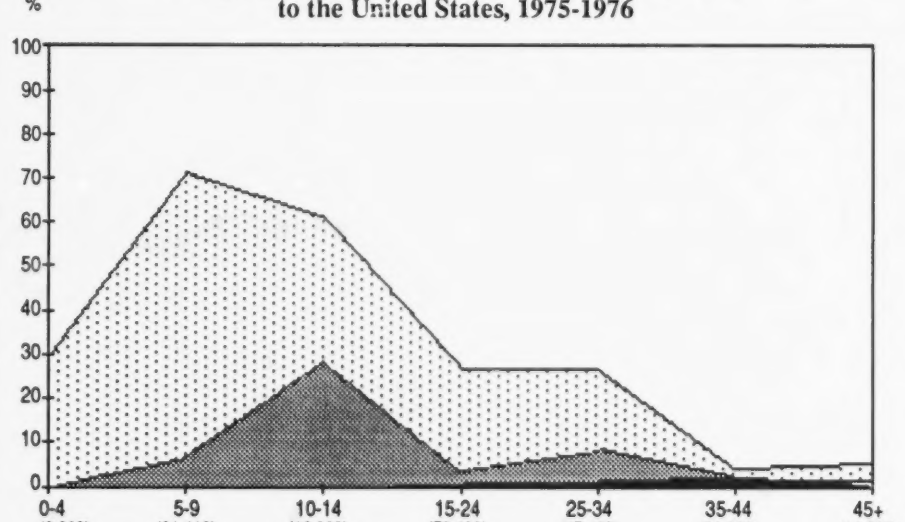


Figure 5.2
Language Shift of Spanish Language Immigrants to the United States, 1975-1976



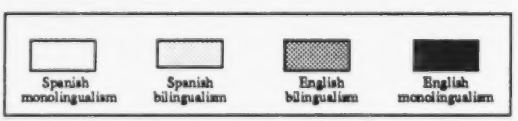


Figure 5.3
Language Shift of Spanish Language Immigrants to the United States, 1970-1974

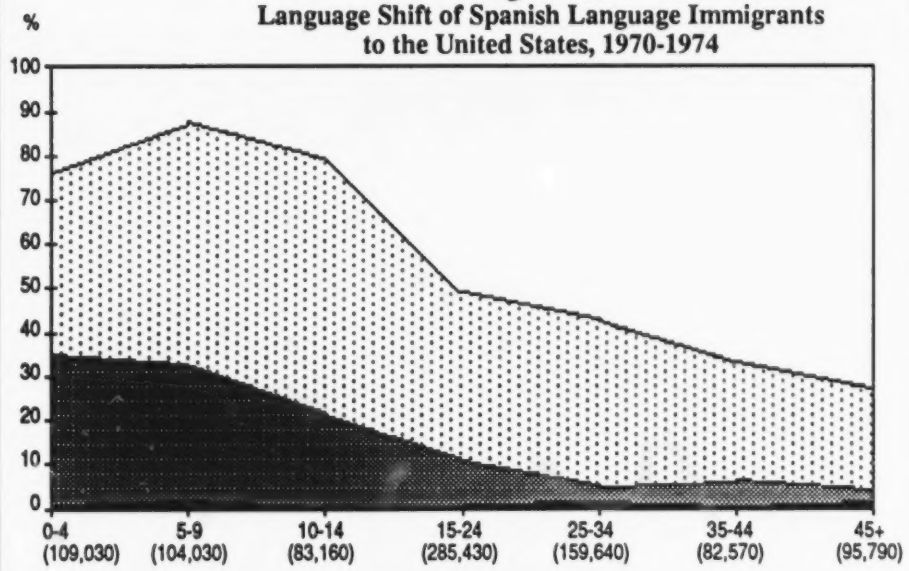
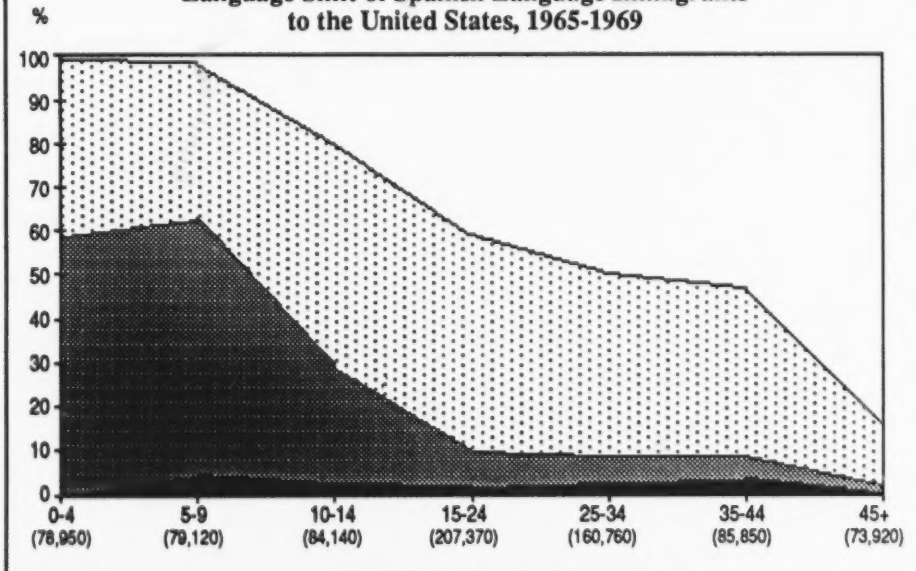


Figure 5.4
Language Shift of Spanish Language Immigrants to the United States, 1965-1969



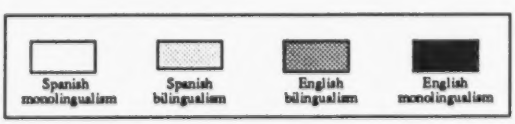


Figure 5.5
Language Shift of Spanish Language Immigrants to the United States, 1960-1964

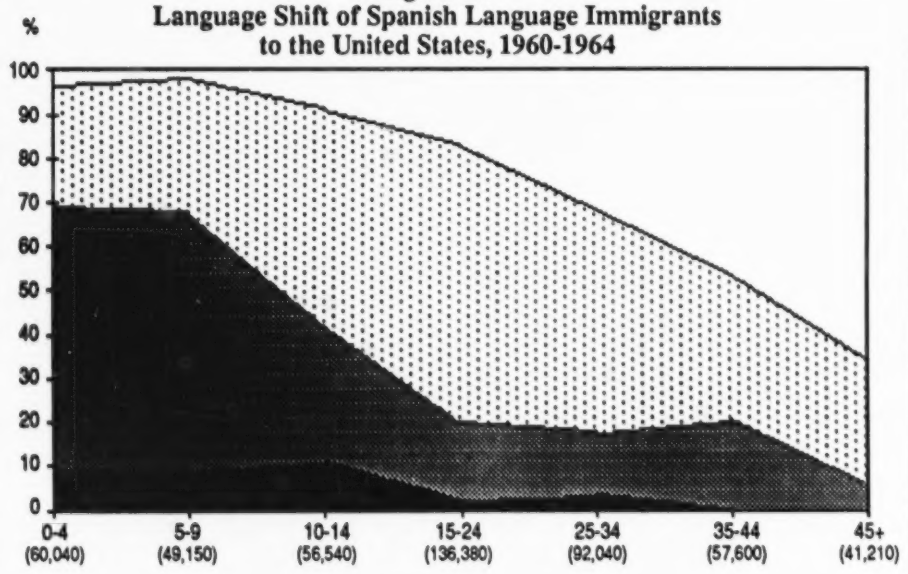
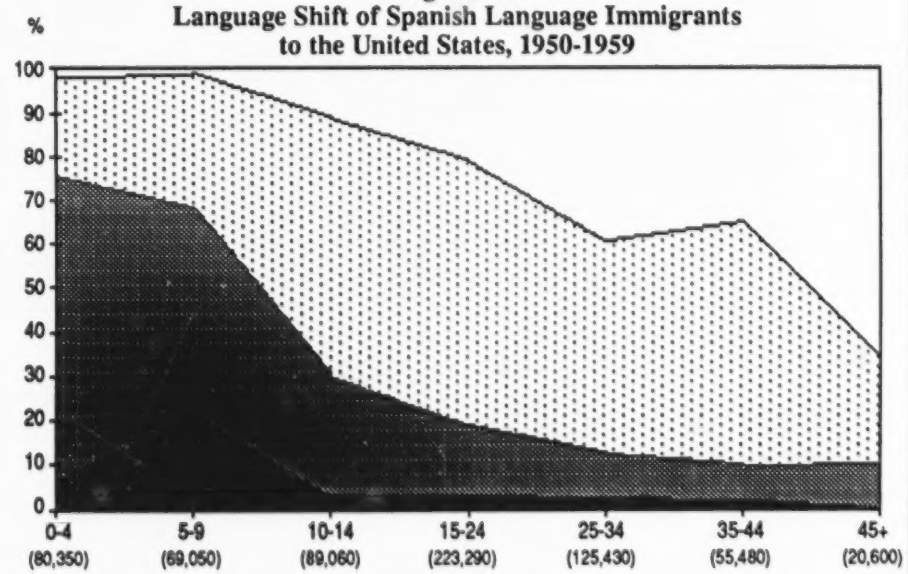
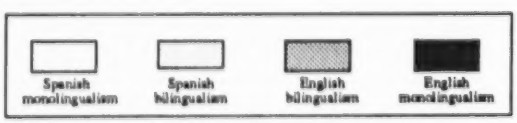


Figure 5.6
Language Shift of Spanish Language Immigrants to the United States, 1950-1959





What These Figures Tell Us

If the cross-sectional data presented in Figures 5.2 through 5.6 can in fact be interpreted longitudinally, the conclusions are quite clear. The language shift process of immigrants begins immediately upon arrival in the United States, progresses rapidly, and ends within approximately 15 years. The data also indicate that age at time of arrival is indeed a crucial factor in determining the type and extent of anglicization which occurs.

In addition, a relatively clear distinction can be drawn between the language shift process of children (0-14 years of age at time of arrival) and older teenagers or adults (15 years or older when they arrived[5]). This finding appears to derive from differences in the social experiences of younger and older immigrants.

Children are rapidly placed in extensive contact with English in the school setting and quickly adopt English as a frequently spoken language[6]. Consider, for example, the language shift process of a hypothetical group of children aged 5-9 when they arrived in the United States. *After an average stay of only nine months, 70 percent will speak English on a regular basis (Figure 5.2). After an average stay of four years, nearly all will speak English regularly, and 30 percent will have adopted English as their usual preferred language (Figure 5.3). After approximately nine years of residence, 60 percent will have been anglicized, (Figure 5.4); after 14 years, 70 percent will have been anglicized and 10 percent will have abandoned the use of Spanish as a daily language (Figure 5.5[7]). At this point they will have become young adults (19-23 years of age), most of whom will have left their childhood homes, the area of social life where the influence of Spanish is greatest (Veltman, 1983, Chapter 5).*

It should be noted that the rates of language shift observed for this hypothetical group conform exactly to those of native-born children of approximately the same age in 1976 (Veltman, 1983). All of the latter spoke English on a regular basis, approximately 60 percent had become English bilinguals, and 10 percent had become English monolinguals, yielding a total anglicization rate of 70 percent. Since both native and foreign-born groups of children this age have been exposed to essentially similar kinds of contact with English, this finding is not surprising. In any case, this comparison tends to confirm the legitimacy of a longitudinal interpretation of the data presented in Figures 5.2 to 5.6.

With respect to older teenagers and adults, most did not come to the United States to obtain a formal education. Since many will find jobs where the use of English may be relatively limited, their exposure to English is less and their motivation to become English-speaking should therefore be lower. Nonetheless, after an average four years of residence, a large minority will speak English on a regular basis (Figure 5.2). After approximately nine years, the majority will do so (except for those aged 45 or more at time of arrival), including some 10 percent who will make English their usual personal language (Figure 5.3). After an average stay of 14 years, the percentage of Spanish monolinguals will have declined still further (Figure 5.4).

As a result, approximately 80 percent of those aged 15-24 at time of arrival, 70 percent of those aged 25-34 at that time, 50 percent of those aged 35-44, and 30 percent of those aged 45 and over will come to speak English on a regular basis. In addition, except for the oldest group, approximately 20 percent of those in each age group will have been anglicized.

Since our model of language shift is essentially based on data covering a 16-year time span (1960-1976), the requirement that the process of language shift should have remain unchanged over time no longer seems to present a major problem. Furthermore, anchoring the language shift process in the school setting or in the workplace also suggests that the immigrant experience with English remains relatively similar from one time period to another[8].

One further variable which must be considered in the modeling of the language shift process of immigrants concerns the impact of return migration to the Caribbean or to Latin America. It could be that our results are in part explained by the return of those who do not speak English well. Our model assumes that there are no differences from a linguistic point of view between those who stay in the United States and those who return to their country of origin. Unfortunately, no available data base would permit us to examine this question.

Conclusion

The data presented in this chapter certainly do not indicate that hispanophone immigrants resist the learning of English; in fact, the data indicate very rapid movement to English on the part of Spanish language immigrants. Given the age structure of the immigrant population, more than three-fourths of any given

group of immigrants will come to speak English on a regular basis after approximately 15 years of residence in the United States.

Even more important, approximately 70 percent of the youngest immigrants and 40 percent of those aged 10-14 at time of arrival will make English their usual, personal language. As a result, they will give birth to children of English, not Spanish, mother tongue. *Approximately five children in eight to be born to these Spanish language immigrants (who themselves represent one-third of all Spanish language immigrants) will have English as a first language!* It would appear, then, that Spanish language immigrants are not resisting the learning of English and that extensive language shift occurs within a very few years.

Notes:

1. Including Puerto Ricans. Most other studies produced by the U.S. Census Bureau do not provide data on the time-of-arrival of Puerto Rican islanders since they are "Americans born abroad" as defined by the Census Bureau.
2. The table likely overstates this difference, however, since the size of the population aged 35 and over who arrived during the 1950s already has been reduced by two decades of mortality.
3. The survey was completed between March and June, 1976.
4. The only notable differences are the presence of a higher than expected English monolingualism rate for those who arrived when aged 5-9 and a lower than expected rate of Spanish monolingualism among those aged 35-44 at time of arrival. These aberrations are most likely attributable to sampling error.
5. This finding also holds true for immigrants in Montreal (Veltman and Panneton, forthcoming) but not necessarily for non-Hispanic groups in the United States (work in progress).
6. That many participate in bilingual education programs should not slow the process of language shift to English. The objective of such programs is, after all, to smooth the transition to English, not to maintain Spanish.
7. This picture of language shift applies as well to immigrants aged 0-4 at time of arrival. The lower rates of language shift observed for 10-14 year olds may reflect the fact that many Hispanic youngsters in their early teens do not attend school. They are not therefore subjected to the same contact with English as are the younger children.
8. As may have been anticipated, the same model applies to different groups. For example, our previous research on FrancoAmericans produced similar results except that the curves obtained were shifted toward the upper right-hand corner of the figure, indicating both higher rates of language shift to English in general and, more particularly, higher rates for younger and older adults (Veltman, 1987).

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Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
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*For more complete definitions see Chapter 1, page 7.

Chapter 6

Language Shift Among the Native Born

Having completed our examination of the language shift process of the foreign born, we turn our attention in this chapter to an examination of the linguistic mobility of native-born persons of Spanish mother tongue. Given the age structure associated with mixed language practice among the native born, we have distinguished this form of language use (English as the usual language associated with Spanish as the language of friendship) from that of Spanish bilingualism. In general, mixed language use has been integrated into the Spanish bilingual category, a practice which we shall resume in succeeding chapters.

Global Rates of Language Shift

The data presented in Chapter 4 permitted us to determine the global rates of language shift to English for persons of Spanish mother tongue. According to Table 4.5, 11.2 percent have become English monolinguals while an additional 40.8 percent have developed an English bilingual language practice. Some 52.0 percent of native-born hispanophones have, therefore, been anglicized. The same table revealed the relative absence of Spanish monolingualism (8.3 percent) and the presence of 39.7 percent Spanish bilinguals.

Two types of language use may be identified among this latter group, those placed in the group because Spanish is the language they usually speak, and those who, although they usually speak English, generally speak Spanish to their best friends. This latter group, 5.4 percent of the hispanophone sample, could have been correctly classified as English bilinguals. Our conservative approach to the definition of anglicization "added" such persons to the Spanish bilingual group. In any case the data show the extensive anglicization of the native born.

Age-Specific Rates of Language Shift

In our previous work on the language shift process in the United States, we established the logic upon which the language practice of the native born can be interpreted in a longitudinal manner[1]. The argument turns upon the fact that previous studies, notably those based on the Canadian census, have associated the language shift process with the social experiences of the individual. In our earlier work we summarized this approach in the following way:

When the child is very young, his mother tongue and subsequent language use are largely determined by the behavior of his parents. Consequently, little language shift is observed.... However, when the child attends school, the linguistic behavior of his peers, together with the official language of instruction and school authorities, begins to play a role in the language capabilities and preferences of the child. During this period there is a notable increase in the percentage of persons who make [a break with the mother tongue]. A more definite break...is associated with the entry of the young adult into the workforce or institutions of higher learning and/or with the selection of a mate. There is accordingly a surge in the rates of language [shift] in the late teens and early twenties. (Veltman, 1983, page 20).

Given the fact, according to the Canadian census data, that the language shift process is nearly always completed by age 35, older cohorts provide us with estimates of the extent to which they underwent language shift before they reached the age of 35. That is to say, if we postulate that no further linguistic mobility occurs after age 35, then the extent of the anglicization of the minority language population 45 years of age provides a reasonable estimate of the anglicization rate which prevailed ten years earlier, i.e., when they completed their language shift process. Similarly, the age-specific rates of language shift of persons aged 55 serve as an estimate of the force of anglicization 20 years earlier.

While we continue to adhere to the general framework outlined above, we have come to believe that the language shift process is completed during adolescence and does not generally continue into the adult years[2]. Thus, nearly all language shift which will be accomplished by a given cohort will be completed before the group will have reached 20 years of age. Consequently, the language shift rates of persons 30 years of age provide us with accurate estimates of the extent of anglicization 10 years prior to the date of the survey, while the rates of 40 year olds indicate anglicization rates which prevailed approximately 20 years earlier.

The placing of language shift at a more precocious age is supported by studies which we carried out in the Greek and Portuguese communities of Montreal (Veltman, 1985) and in the Alsatian region of France (Veltman and Denis, forthcoming). According to our data, which have been confirmed by three additional studies undertaken by the Institut Québécois de Recherche sur la Culture in the Arab, Armenian and Chinese communities of Montreal (Veltman and Panneton, forthcoming), most language shift is largely completed by the time children finish elementary school, although continued movement to a national language occurs during the high school years.

Given this understanding of the structure of the language shift process, the long-term evolution of anglicization rates is illustrated in Figure 6.1. Language transfer to English accelerates rapidly during early childhood but begins to level off during the adolescent years. Since no further movement is anticipated after 20 years of age, each older age group furnishes us with an estimate of the extent of anglicization at some prior point in time.

Three "ideal types" of the evolution of language shift are represented in Figure 6.1. If each younger group is more anglicized than its predecessor, then the anglicization curve will take the shape "i" (increasing rate of language shift); if the process of anglicization is invariant over time, the curve will follow the trajectory "c" (constant); and if each younger group is less anglicized than its predecessor, the curve will manifest a slope from right to left (curve "d," a declining rate of anglicization).

Age-specific rates of anglicization for native-born hispanophones are presented in Figure 6.2, which is interpreted in the same manner as those in Chapter 5. In addition, we have identified mixed language practice (i.e., English usual language but Spanish as a language of firendship) as a separate category.

The area between the upper curve and the curve immediately below it represents Spanish bilingualism, while the area between the two middle curves identifies the mixed language practice normally included within the broader category of Spanish bilingualism. It should be remembered that such persons normally speak English but usually speak Spanish to their friends.

The examination of Figure 6.2 reveals that the three upper curves follow the "i" shaped curve which indicates increasing rates of language mobility over time. Only the bottom curve follows the "c" shape indicating stable rates of English monolingualism: approximately 15 percent of each age group has become English monolingual. Only children and adolescents have lower rates of English monolingualism, a finding which may be interpreted in two ways. Either the long-term rates of English monolingualism

Figure 6.1
Three Models of the Evolution of Language Shift

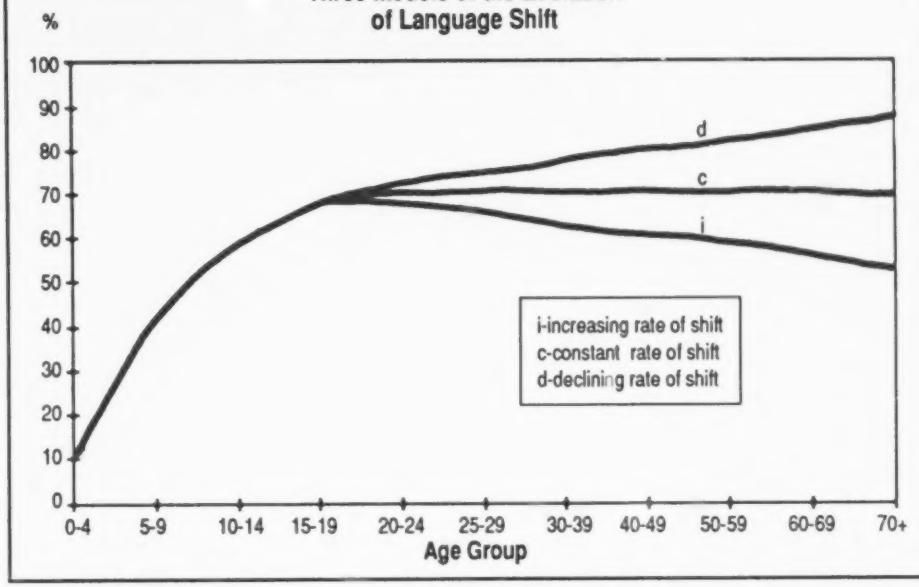
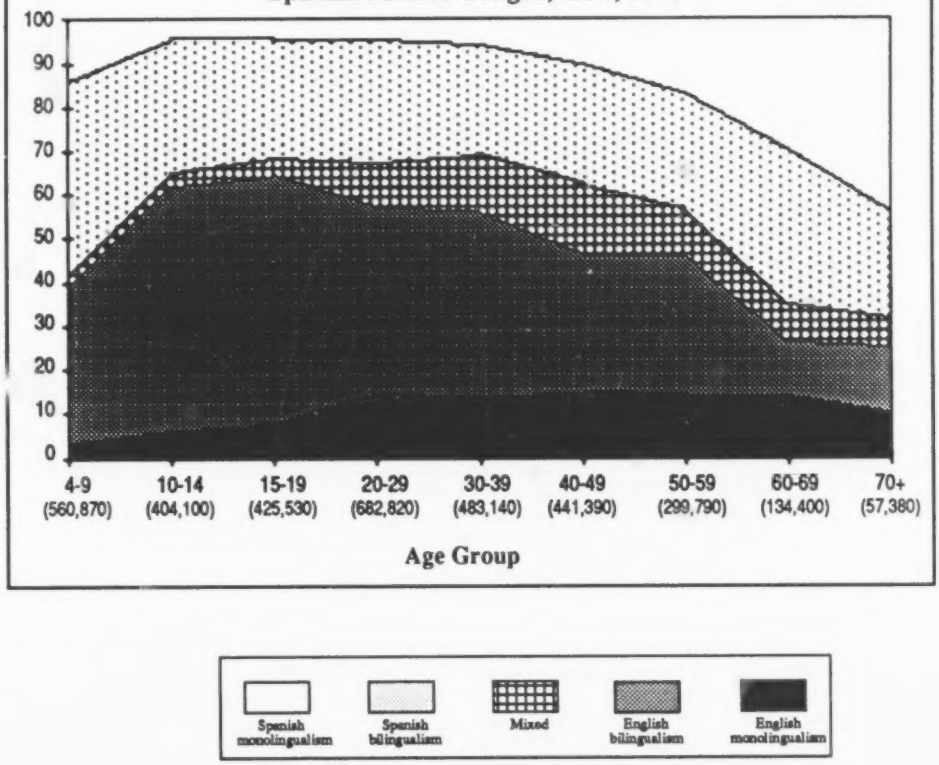


Figure 6.2
Language Shift of the Native Born: Spanish Mother Tongue, USA, 1976



are decreasing over time, or this type of anglicization may continue into the adult years. This latter explanation appears most probable since younger children maintain extensive contact with their Spanish language parents. After they move out, however, their use of Spanish may decline markedly, to the point where it no longer is employed on a regular basis ("often").

At the other end of the spectrum Figure 6.2 indicates that Spanish monolingualism among the native born is a thing of the past. While approximately 40 percent of the oldest persons never adopted English as their personal language of use, *less than 5 percent of each age group from 10 to 39 years of age does not speak English on a regular basis. Even among the very youngest children, only 13 percent do not as yet speak English as a daily language.*

Another feature of the evolution of the language practice of hispanophones concerns the general rise in anglicization rates. In fact, the increase in age-specific rates of anglicization (second curve from the bottom) closely parallels the decline in Spanish as the sole language of daily use. This general parallelism stops among the current group of adolescents: the anglicization rates continue to increase but Spanish monolingualism can no longer decline. Nearly everyone already speaks English, a fact which has been true for the last 20 years.

The data also reveal an evolutionary increase in anglicization rates. While less than 58 percent of the 20-39 year olds have been anglicized, approximately 63 percent of the 15-19 year olds have made language transfers to English. The rate is only slightly lower among the 10-14 year olds. Equally notable, approximately 40 percent of the 4-9 years olds have already made English their principal language of use, a finding which confirms the precocious nature of language shift.

With respect to the evolution of mixed language practice, it would appear that this phenomenon is more widespread among adults than it is among teenagers. Further, were we to adopt an alternative strategy and consider such persons anglicized, the data then suggest that the general anglicization rate is remaining relatively steady at approximately 70 percent: this is true for all groups aged 15-30.

Conclusion

The data presented in this chapter reveal that the rate of language shift to English has been accelerating over the past half-century. Less than 30 percent of the oldest age group made English their usual personal language when they were young, and only 60 percent spoke it on a regular basis. Nearly all native-born teenagers now speak English on a regular basis, and five in eight already have made a language transfer to the English language group.

If we exclude the two oldest age groups from a trend analysis, Figure 6.2 reveals that anglicization has increased from approximately 40 percent among the 50-59 year olds to some 63 percent among the 10-19 year olds, an increase of some 4-5 percent per decade, providing that our longitudinal interpretation is justified by the data. On the other hand, there is no reason to believe that rates of English monolingualism will increase over time, since these rates appear to be relatively stable. In fact, it is possible that English monolingualism is undergoing some slight decline[3].

Nonetheless, the data presented in this chapter are conclusive. When hispanophone immigrants are not themselves anglicized, they will give birth to children of Spanish mother tongue. These children will be extensively anglicized, approximately 4 in 10 during their childhood years and more than 6 in 10 during adolescence. Further, these figures appear to be following a persistent trend, increasing steadily over time. Only a minority, albeit substantial, will likely raise children of Spanish mother tongue. These children in turn will be subjected to the still higher rates of anglicization which the future appears to hold in store.

It may, of course, be true that anglicization rates vary from one part of the country to another. The Spanish language group will survive more easily in an area where the anglicization rates of both immigrants and the native born are lower than elsewhere. The examination of this possibility is the subject of our next chapter.

(For Chapter 6 Notes, see next page.)

Notes:

1. The relevant discussion, including references to data which support this point of view, is found in Veltman, 1983, pages 20-26.
2. In short, we have come to believe that the Canadian census produces language data which underestimate the extent of language shift during childhood and early adolescence. This is true because minority language children continue to speak their mother tongue to their parents. Since the parents fill out the census questionnaire, they report that the child "usually" speaks his mother tongue at home, i.e., with his parents. In fact, that same child usually speaks French or English with his siblings and friends. Not until the child can fill out the census questionnaire for himself, that is, as an adult, can he declare that he "usually" speaks a national language.
3. Even were this the case, the long-term effect is negligible since most children born to English bilinguals will be English monolinguals by the time they become adults.

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 7

Regional Aspects of Language Shift

In our previous study of language shift patterns of hispanophones, we adopted a rather stringent definition of the regions retained for analysis (Veltman, 1983). For example, we created a New York metropolitan region comprising Standard Metropolitan Statistical Areas (SMSAs) from the states of New York, Connecticut, and New Jersey; similarly, we limited our analysis to the examination of the language shift patterns of people living in the larger urban areas of Southern California or in the rural areas of Louisiana.

In this study we have adopted a more flexible approach. Originally, we intended to present data for each of the nine regions defined by the U.S. Bureau of the Census. However, closer inspection of the data revealed that the Spanish language group is heavily concentrated in a limited number of states, ten to be exact. Since those living in the states of New York, New Jersey, and Pennsylvania present similar characteristics, they have been combined into a single category representing the Spanish communities concentrated in the corridor linking Philadelphia to the city of New York. We shall refer to this area as the Northeastern corridor.

Regional Location of the Spanish Origin Group

Table 7.1 presents the geographic distribution of the Spanish origin group among the nine areas retained for analysis. As this table shows, more than 70 percent live in only three regions: California, Texas, and the Northeastern corridor. More than one-half live in just two states: California and Texas.

It is likely that the percentage of hispanophones living in Florida is greater at the present time than it was in 1976, since some 140,000 Cubans and 120,000 Central Americans were legally admitted to the United States between 1976 and 1980. Many of the former and undoubtedly some of the latter prefer Florida to other areas of Hispanic concentration. When the children born to Hispanic immigrants between 1976 and 1980 are added to that group, it is likely that its total size approached 1 million persons in 1980, a number far below that living in the Northeastern corridor but substantially higher than that found for the other states listed in Table 7.1.

Not all of these persons are, of course, hispanophones. Table 7.2 reveals wide differences in the composition of the population in the different regions

Table 7.1
Size of the Spanish Origin Group:
Selected States, United States, 1976

States	N	Percent
California	3,139,050	28.6
Texas	2,591,560	23.5
Northeast	2,024,670	18.4
Florida	712,140	6.5
Illinois/Indiana	411,800	3.7
New Mexico	410,500	3.7
Arizona	356,810	3.2
Colorado	233,740	2.1
Other States	1,135,450	10.3
Total	11,015,720	100.0

Source: SIE 1976

Table 7.2
Mother Tongue of the Spanish Origin Group
by Place of Residence, United States, 1976

Mother Tongue	California	Texas	Northeast	Florida	Illinois
English	34.6	28.5	17.7	18.4	26.1
Spanish	64.4	71.4	80.4	80.1	73.1
Other	1.0	0.1	1.9	1.5	0.8
Total (%)	100.0	100.0	100.0	100.0	100.0

Mother Tongue	New Mexico	Arizona	Colorado	Other States
English	36.2	40.9	54.4	41.9
Spanish	63.5	57.5	45.1	56.4
Other	0.3	1.6	0.5	1.7
Total (%)	100.0	100.0	100.0	100.0

Mother Tongue	Total	N
English	30.1	3,319,740
Spanish	68.8	7,582,160
Other	1.1	113,820
Total	100.0	11,015,720

Source: SIE 1976

selected for analysis. In Colorado, one of the traditional states of Mexican American residence, anglophones outnumber hispanophones. High percentages of persons of English mother tongue are also found in Arizona, New Mexico, California, and the residual group of states. Approximately one-fourth of the population is anglophone in Texas and in Illinois, while the figure is less than one-fifth in New York and Florida.

These differences are most likely related to two factors: time of arrival of the immigrant population and regional variation in anglicization rates. As we have previously seen, groups of immigrants who have lived for a longer period in the United States should be more anglicized than recent arrivals. Consequently, a larger proportion of their children may be expected to have English for their mother tongue.

On the other hand, due to differences in the absolute size of the Spanish language group or in the nature of the regional economy, we may discover some regional differences in anglicization rates. Such differences are important because they are related to the future size and linguistic composition of the Spanish language group in each region. Thus, a region having low anglicization rates for immigrants will contain a larger native-born population of Spanish mother tongue; should the anglicization rate of the native born remain low, Spanish will be transmitted to the third or even the fourth generation.

The Nativity Profile of Hispanophones in Each Region

As revealed in Table 7.3, it would appear that the presence of anglophones in the Spanish origin group is indeed related to differences in the nativity profile of the regions retained for analysis. For example, more than three-fourths of the hispanophone population in Arizona, Colorado, and New Mexico are native born. Given the high anglicization rates observed in Chapter 6 for the native born, it is highly probable that many of the children living in Spanish language homes will have English for their mother tongue. This is precisely what we found in Table 7.2.

Similarly, more than half of California's hispanophone population is native born, a finding which is associated with a lower percentage of hispanophones in the Spanish language group. Once again, New York and Florida have the highest percentage of immigrant hispanophones, a finding consistent with the low percentage of anglophones observed in Table 7.2.

Nonetheless, a number of exceptions to this general rule suggest that regional differences are also at work. For example, the state of Texas is characterized both by a large number of native-born hispanophones and by a relatively small number of anglophones. Similarly, there are approximately the same percentage of immigrants in Illinois as in the residual states; nonetheless, anglophones are much less numerous in Illinois than in the other states.

The Changing Pattern of Regional Settlement

Table 7.4 presents the observed place of residence of Spanish language immigrants as a function of their period of arrival. The observed pattern is clearly related to the national origins of hispanophone immigrants as shown in Table 4.2. For example, before 1950 two principal groups contributed to hispanophone immigration, Puerto Ricans and Mexicans. Consequently, more than 8 in 10 migrants settled in the states of California and Texas (Mexicans) and in the Northeastern corridor (Puerto Ricans).

During the 1950s Puerto Rican immigration assumed much greater importance and the Northeastern corridor obtained nearly 40 percent of all hispanophone immigrants. Similarly, Cubans arrived for the most part during the 1960s; accordingly, the number of immigrants settling in Florida rose dramatically during that period, while the number of those settling in the Northeast declined and the number of those going to California and Texas remained relatively stable. When Mexican migration came once again to the fore during the 1970s, most immigrants went to California and fewer to Texas than in the past. At the same time, the proportion of immigrants going to New York declined to about one-fourth of the total, the lowest in recent history.

The Language Use of Hispanophone Immigrants

Limiting our attention to the language practices of persons of Spanish mother tongue, we present in Table 7.5 the global rates of anglicization for the foreign born in each region. If we consider the national average for anglicization as representing the expected level of language shift, these data reveal that immigrants living in Texas and New Mexico are less anglicized (mono-

Table 7.3
Nativity Profile by Place of Residence: Persons of Spanish Mother Tongue, United States, 1976

	California	Texas	Northeast	Florida	Illinois
Native Born	50.6	76.7	31.7	20.3	43.2
Immigrants	49.4	23.3	68.3	79.7	56.8
Before 1950	8.1	5.4	9.2	3.9	4.3
1950-1959	6.8	4.9	16.5	8.9	13.6
1960-1969	14.0	6.5	23.6	48.0	19.6
1970-1976	20.5	6.5	19.0	18.9	19.3
Total (%)	100.0	100.0	100.0	100.0	100.0
(N)	2,020,310	1,850,600	1,628,080	570,680	300,890

	New Mexico	Arizona	Colorado	Other States
Native Born	91.8	77.6	85.8	47.0
Immigrants	8.2	22.4	14.2	53.0
Before 1950	1.5	5.0	3.5	4.9
1950-1959	1.4	4.1	1.8	9.7
1960-1969	2.2	7.3	3.6	18.7
1970-1976	3.1	6.0	5.3	19.7
Total (%)	100.0	100.0	100.0	100.0
(N)	260,680	205,290	105,380	640,250

	Total	N
Native Born	52.7	3,993,640
Immigrants	47.3	3,588,530
Before 1950	6.5	498,140
1950-1959	8.8	664,740
1960-1969	16.7	1,263,780
1970-1976	15.3	1,161,870
Total (%)	100.0	7,582,160

Source: SIE 1976

Table 7.4
Place of Residence by Period of Immigration: Persons of Spanish Mother Tongue, United States, 1976

	Period of Immigration					
Selected States	**Before 1950%**	**1950-1959%**	**1960-1964%**	**1965-1969%**	**1970-1974%**	**1975-1976%**
California	32.7	20.8	18.7	24.6	34.5	40.6
Texas	20.2	13.8	11.5	8.1	10.9	7.9
Northeast	30.1	40.3	29.0	31.5	27.2	24.0
Florida	4.5	7.6	23.6	20.5	10.7	3.5
Illinois	2.6	6.2	3.4	5.5	5.0	4.9
New Mexico	0.8	0.5	0.4	0.5	0.7	0.5
Arizona	2.1	1.2	2.1	0.6	0.9	1.6
Colorado	0.7	0.3	0.4	0.2	0.5	0.4
Other States	6.3	9.3	10.9	8.5	9.6	16.6
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0
(N)	498,140	664,740	493,170	770,610	938,050	223,820

Source: SIE1976

Table 7.5
Language Use of Immigrants: Persons of Spanish Mother Tongue, Four Years of Age or More by Place of Residence, United States, 1976

Language Use	California	Texas	Northeast	Florida	Illinois
English Monolingual	4.1	2.0	2.6	1.4	2.0
English Bilingual	19.9	10.6	21.9	19.5	20.4
Spanish Bilingual	34.7	39.7	45.0	53.5	39.3
Spanish Monolingual	41.3	47.7	30.5	25.6	38.3
Total (%)	100.0	100.0	100.0	100.0	100.0
(N)	986,470	424,820	1,105,620	451,080	168,460

Language Use	New Mexico	Arizona	Colorado	Other States
English Monolingual	1.7	3.1	11.9	11.1
English Bilingual	14.9	21.3	38.1	25.5
Spanish Bilingual	38.0	45.7	37.1	40.2
Spanish Monolingual	45.4	29.9	12.9	23.2
Total (%)	100.0	100.0	100.0	100.0
(N)	21,100	45,890	14,950	333,960

Language Use	Total (%)	N
English Monolingual	3.6	128,030
English Bilingual	20.0	709,380
Spanish Bilingual	41.8	1,484,630
Spanish Monolingual	34.6	1,230,300
Total	100.0	3,552,340

Source: SIE 1976

Table 7.6
Language Use of Native Born: Persons of Spanish Mother Tongue, Four Years of Age or More by Place of Residence, United States, 1976

Language Use	California	Texas	Northeast	Florida	Illinois
English Monolingual	16.1	5.8	7.7	12.8	16.6
English Bilingual	53.1	28.8	49.5	43.5	47.7
Spanish Bilingual	24.2	54.1	34.3	34.1	29.3
Spanish Monolingual	6.6	11.3	8.5	9.6	6.4
Total (%)	100.0	100.0	100.0	100.0	100.0
(N)	890,190	1,276,090	409,420	93,200	95,110

Language Use	New Mexico	Arizona	Colorado	Other States
English Monolingual	9.7	6.3	23.3	24.3
English Bilingual	31.9	45.1	50.7	42.1
Spanish Bilingual	50.7	45.2	23.6	30.0
Spanish Monolingual	7.7	3.4	2.4	3.6
Total (%)	100.0	100.0	100.0	100.0
(N)	230,820	145,140	87,390	261,990

Language Use	Total (%)	N
English Monolingual	11.2	391,390
English Bilingual	40.8	1,422,330
Spanish Bilingual	39.7	1,387,060
Spanish Monolingual	8.3	288,570
Total	100.0	3,489,350

Source: SIE 1976

lingualism and bilingualism combined) than could be expected. On the other hand, those living in Colorado and the other 40 states are much more anglicized than expected. Immigrants living in the other regions present anglicization patterns similar to those for the nation as a whole.

As has been seen in Chapter 5, age at time of arrival is significantly related to language practice. Similar curves of language shift have been developed for immigrants in each region with the exception of Arizona, New Mexico, and Colorado, where the number of immigrants is too small to sustain this type of analysis. The data to be presented will summarize the language shift process of all immigrants who arrived in each region between 1950 and 1976.

In order to compare more directly the rates of anglicization between regions, we should like to examine language shift as a function of both age at time of arrival and the length of time in which immigrants have resided in the United States. Unfortunately, sample sizes are simply not large enough to sustain such an analysis. As a result, we have decided to standardize time of arrival in the United States, reweighting the data for each region such that the proportions of immigrants arriving in each specific time period from 1950 to 1976 are the same. Accordingly, differences observed in the figures which follow reflect residual differences between groups once time of arrival has been standardized. Further, since age at time of arrival is the independent variable in the following charts, differences in the shape and location of language shift curves may be directly attributed to regional differences and other variables associated with regional location.

Figure 7.1 presents the data for hispanophone immigrants in California. Examining first of all the rate of Spanish monolingualism, this figure shows that the younger the group of immigrants on arrival, the lower the percentage of those who do not speak English on a regular basis. As expected, the rates of Spanish monolingualism are sharply higher for those who were at least 15 years old when they arrived in the United States. A majority of those in each group remains monolingual in Spanish, a figure which reaches approximately 70 percent among those aged 45 and over when they came to the United States.

If the presence of English monolingualism remains generally very low in California, the anglicization curve follows a very interesting trajectory. While the two youngest age groups are highly anglicized, only 20 percent of those aged 10-14 at time of arrival usually spoke English, a figure which drops to less than 15 percent of those aged 15-24 when they came to the United States. However, the anglicization curve then rises slightly for each older age group, a result which may suggest that the rate of anglicization may be undergoing a slow, long-term decline in California, presumably because the large influx of immigrants makes it easier for people to retain Spanish as their principal language of use.

Figure 7.2 presents similar data for hispanophone immigrants living in Texas. While the general shape of this figure resembles that of the preceding figure, all three language shift curves are located closer to the bottom of the figure, indicating greater retention of Spanish-language use of all types. For example, English monolingualism is virtually non-existent in Texas. Further, the retention of Spanish as their usual preferred language is nearly universal among immigrants who were at least 15 years old when they arrived in the United States; in fact, most such immigrants remain monolingual in Spanish.

Immigrants in the Northeastern states appear to follow the language shift pattern observed in California, with three small exceptions (Figure 7.3). First of all, rates of Spanish monolingualism tend to be somewhat lower in the Northeast. Secondly, a larger percentage of those who arrived when they were 5-14 years old made English their usual language in this region; on the other hand, fewer of those who were 15 years of age or more at time of arrival had been anglicized.

Figure 7.4 shows that English monolingualism is virtually absent in Illinois. In fact, little anglicization is observed for immigrants who were 15 years of age or more when they arrived in the United States. On the other hand, the young are declared to have extremely high anglicization rates. The steep slope of the two principal curves indicates the presence of a sharp linguistic division in the Spanish language group in this region. Most persons who were at least 25 years old when they came to the United States remained monolingual in Spanish; on the other hand, most of those who were children at time of arrival usually speak English.

As shown in Figure 7.5, hispanophone immigrants in Florida present still another variation on the same general set of curves. The anglicization curve strongly resembles that found in California, except that those who arrived when they were 10-14 years old retained

Figure 7.1
Language Shift of Spanish Language Immigrants to the USA, California, 1950-1976

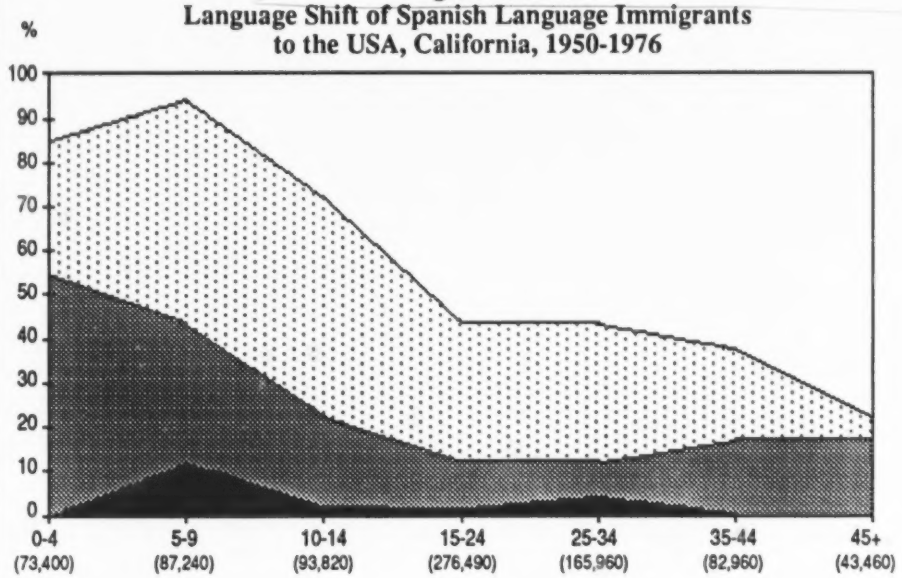
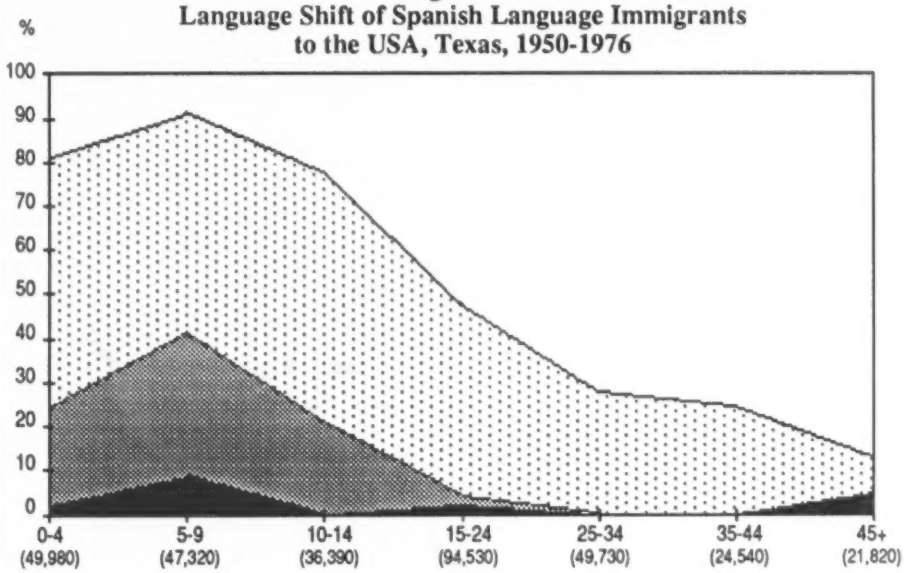


Figure 7.2
Language Shift of Spanish Language Immigrants to the USA, Texas, 1950-1976



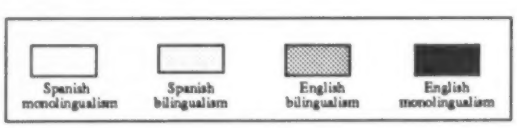


Figure 7.3
Language Shift of Spanish Language Immigrants to the USA, Northeast, 1950-1976

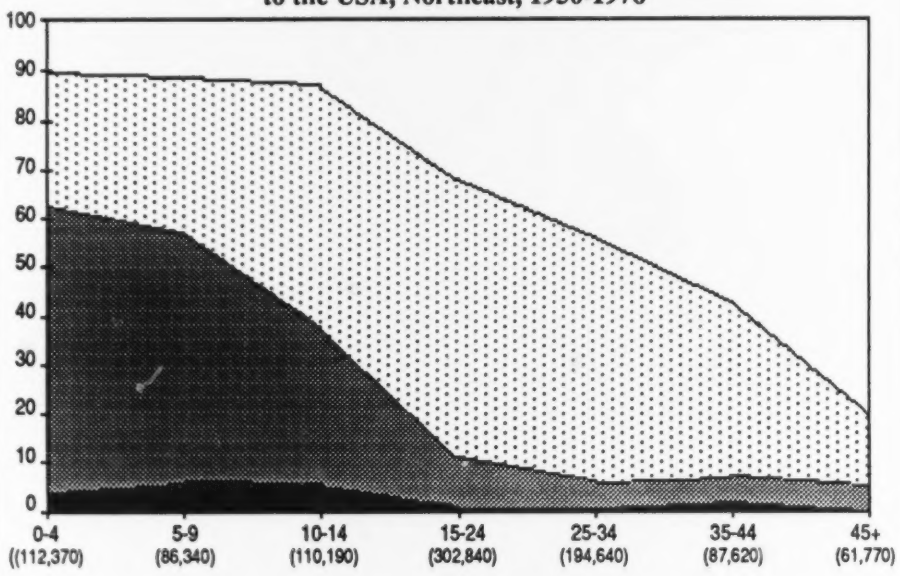
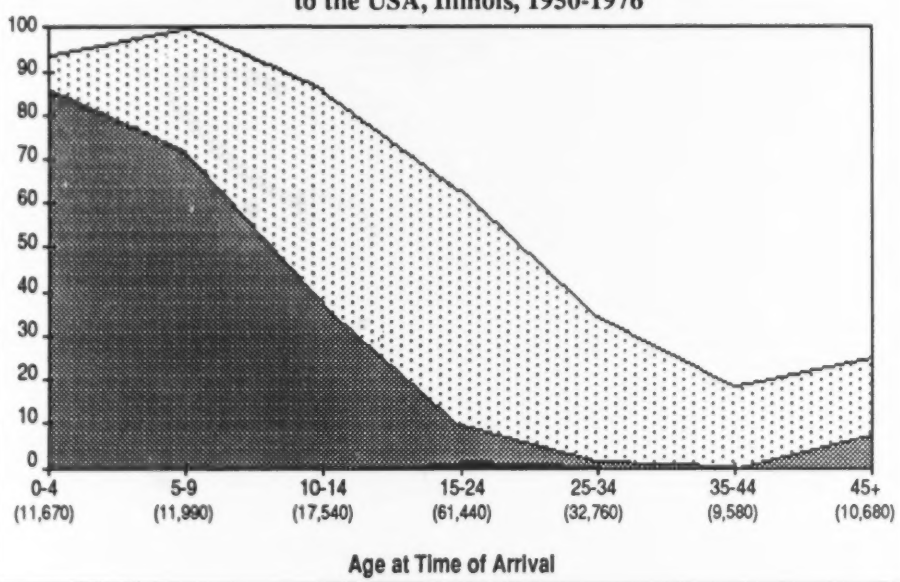


Figure 7.4
Language Shift of Spanish Language Immigrants to the USA, Illinois, 1950-1976



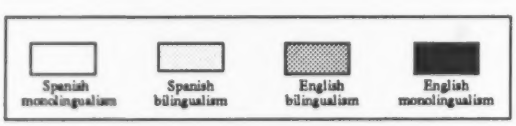


Figure 7.5
Language Shift of Spanish Language Immigrants to the USA, Florida, 1950-1976

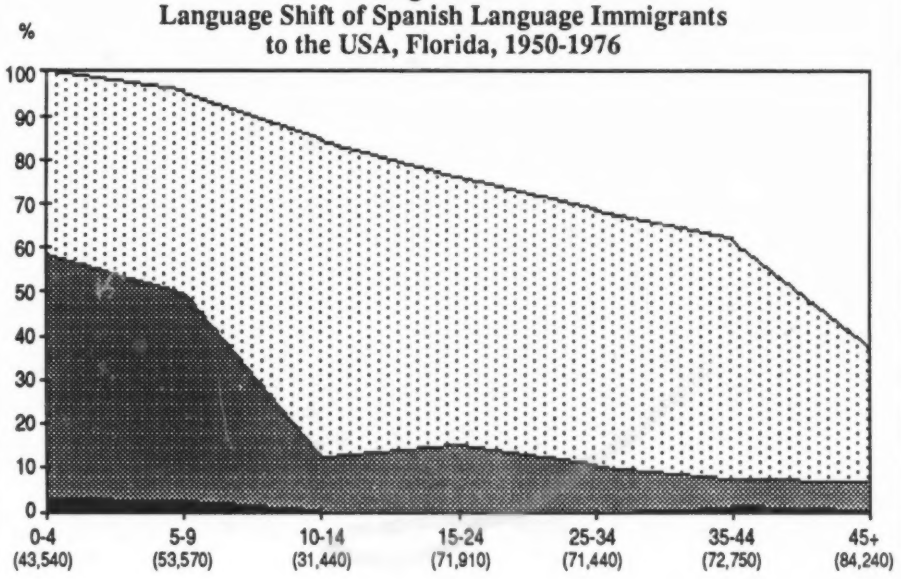
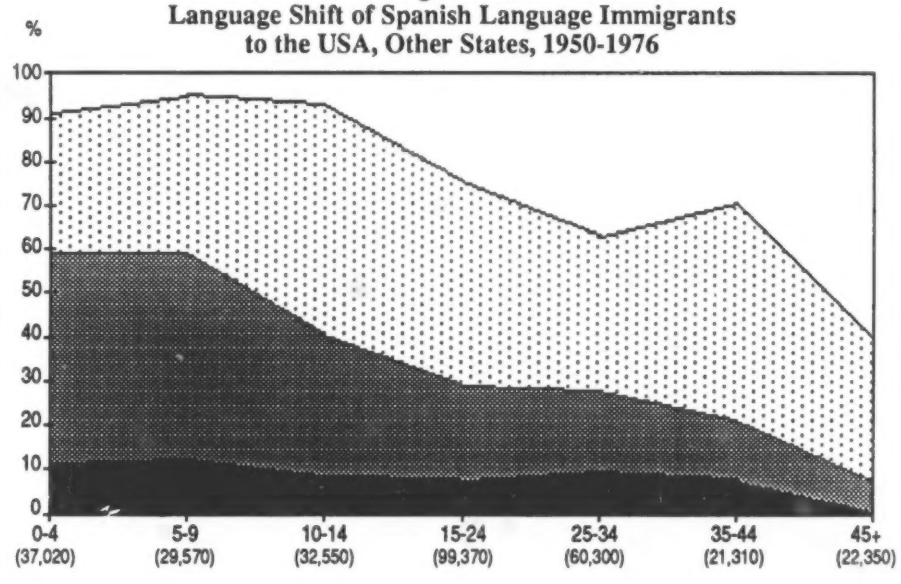
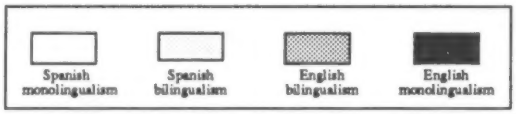


Figure 7.6
Language Shift of Spanish Language Immigrants to the USA, Other States, 1950-1976





Spanish at rates similar to those found for immigrants living in other regions. On the other hand, a majority of immigrants in all age groups except the oldest have come to speak English on a regular basis. The flatness and regularity of the upper curve indicate the extent to which Spanish language Floridians have adopted Spanish bilingualism as a dominant style.

Finally, Figure 7.6 reveals that the pattern of Spanish monolingualism outside the traditional areas of Hispanic concentration tends to resemble that found in Florida. Rates of anglicization are uniformly higher than those observed in the previous figures and appear to decline regularly as age at time of arrival increases. No important distinction can be drawn between those who were younger than 35 and those who were younger than 15 when they came to the United States. Further, we should note that approximately 10 percent of those in all age groups except the oldest have abandoned Spanish as a frequently used language, a practice seldom observed in the traditional areas of Hispanic settlement.

The examination of Figures 7.1 to 7.6 reveals nonetheless a relatively similar process of language shift between regions of settlement in the United States. Generally speaking, the younger the immigrant at time of arrival, the more extensive the shift to English. However, the vast majority of those who were at least 15 when they came to the United States retain Spanish as their daily preferred language. Each region, however, is somewhat unique, presenting a set of language shift curves distinct in terms of their slope or placement (higher or lower) on the figures examined. It is clear, nonetheless, that each is a variation on the same general theme.

The Language Use of Native-Born Hispanophones

As can be seen from Table 7.6, the only two states presenting anglicization rates below the national averages are those of Texas and New Mexico. Once again, anglicization rates are the highest in Colorado and in the residual states although the hispanophone communities in California and Illinois are also considerably more anglicized than expected. This is not only true for anglicization as a whole; it also holds for rates of English monolingualism. The data also show that three regions present profiles which closely follow the national average: the Northeastern corridor, Arizona, and Florida. The latter state differs, however, from the two other regions in that the rate of English monolingualism is approximately twice as high.

In order to examine more closely the evolution of language shift in general and anglicization in particular, age-specific rates of linguistic mobility were calculated for native-born hispanophones in all regions except Florida. There were simply too few native-born persons of Spanish mother tongue who lived in this region in 1976 to permit the generation of language shift curves.

Beginning with the largest native-born population, Figure 7.7 presents the language shift characteristics of Texas hispanophones. As elsewhere, Spanish monolingualism has virtually disappeared in the younger age groups whereas over 30 percent of the oldest cohort remained monolingual in their mother tongue. The data also reveal rising rates of anglicization over time. While less than 20 percent of the oldest group underwent language transfer to English, the figure has reached nearly 50 percent among 15-19 year olds. On the other hand, rates of English monolingualism appear to be relatively stable.

The language shift profile in New Mexico (Figure 7.8) approximates closely that observed in Texas, except that the rates of each type of language shift are slightly higher. This situation is true of both younger and older persons.

In Arizona (Figure 7.9), there has been a sharp recent rise in anglicization rates. While only 30-40 percent of native-born hispanophones aged 30 and over have made language transfers, the figure hovers around 70 percent for the younger age groups. Nonetheless, rates of English monolingualism remain low.

The continued waves of immigrants settling in California (Table 7.10) have not stabilized the linguistic assimilation of the native born. While rates of English monolingualism appear to have declined over time, anglicization rates have risen steadily. More than 85 percent of the 10-14 year olds have been anglicized while slightly more than 60 percent of the oldest age group made language transfers to English. This latter fact should not go unnoticed: anglicization rates among the native born have always been very high in California.

Few native-born hispanophones are found in the older age groups in the Northeast region of the United States (Figure 7.11), a finding which may account for the irregular character of the anglicization curve. Nonetheless, current anglicization rates exceed 70 percent for the 10-19 year old age groups. As in

Figure 7.7
Language Shift by Native Born in the USA, Texas, 1976

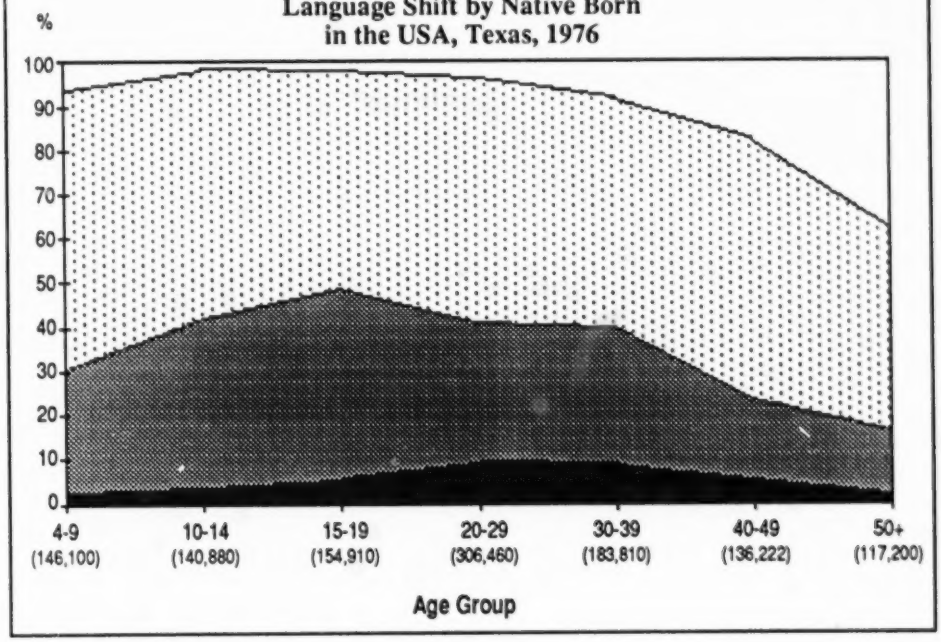
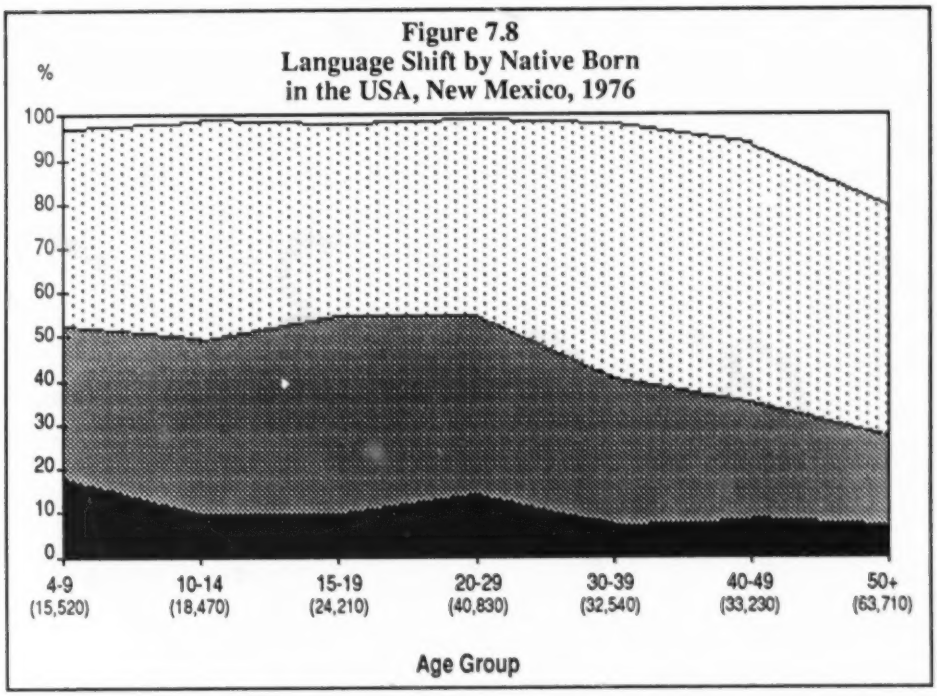


Figure 7.8
Language Shift by Native Born in the USA, New Mexico, 1976



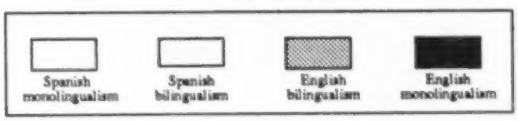


Figure 7.9
Language Shift by Native Born in the USA, Arizona, 1976

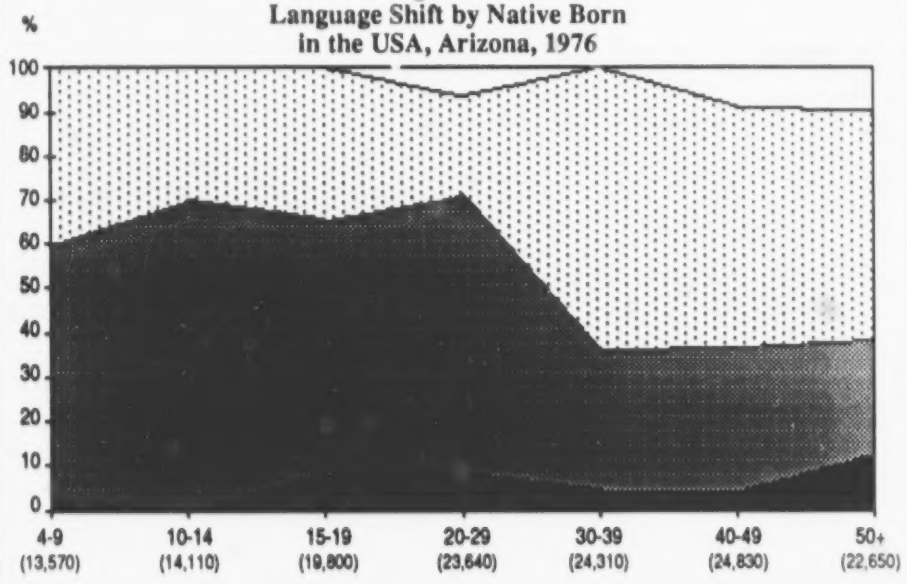
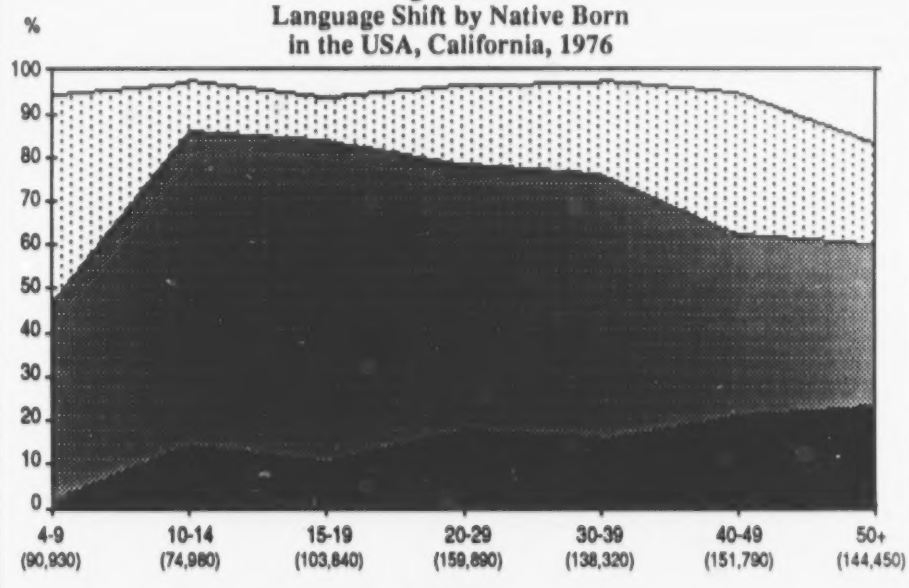


Figure 7.10
Language Shift by Native Born in the USA, California, 1976



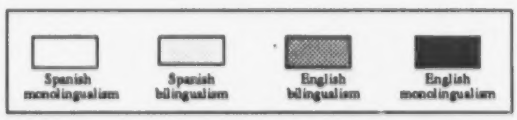


Figure 7.11
Language Shift by Native Born in the USA, Northeast, 1976

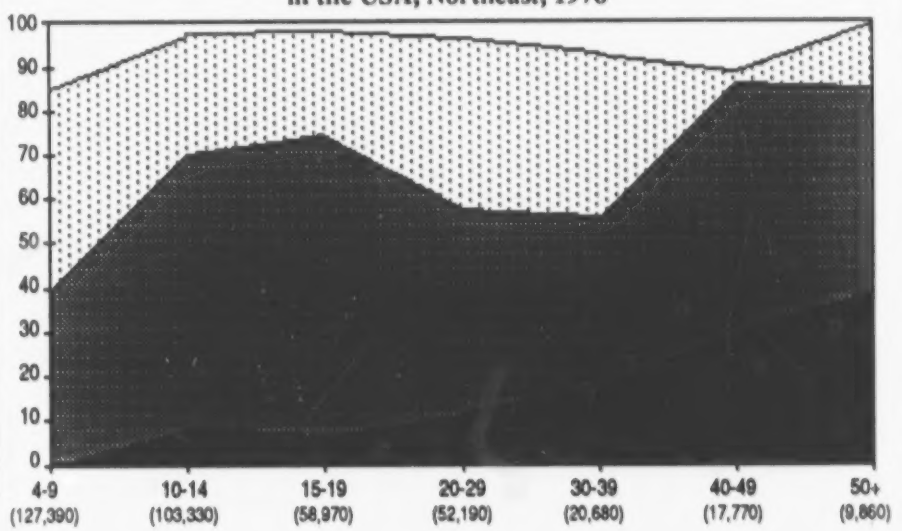
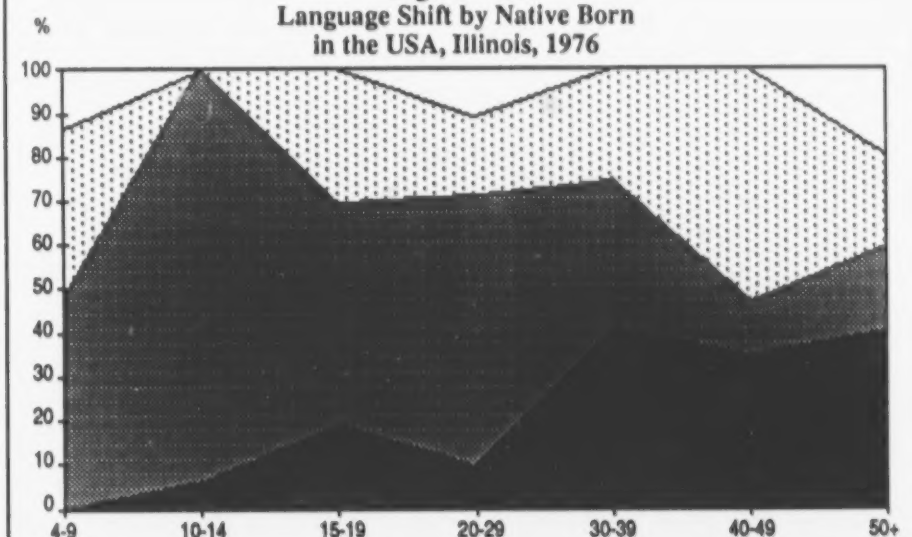


Figure 7.12
Language Shift by Native Born in the USA, Illinois, 1976



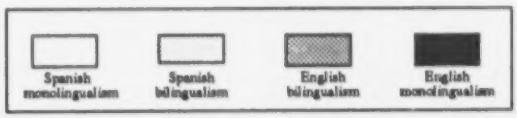


Figure 7.13
Language Shift by Native Born in the USA, Colorado, 1976

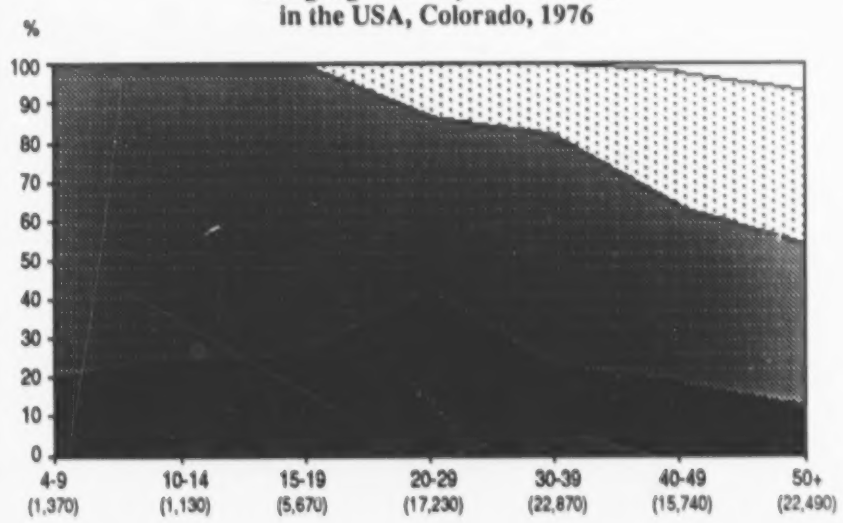
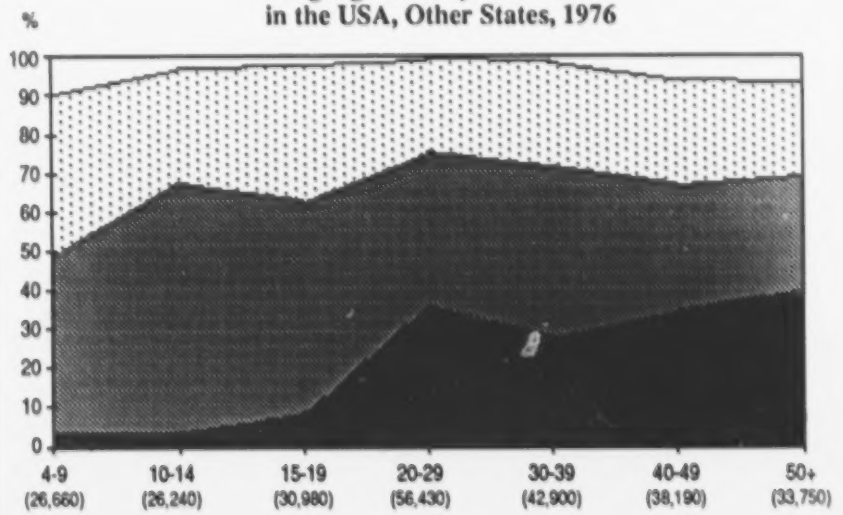
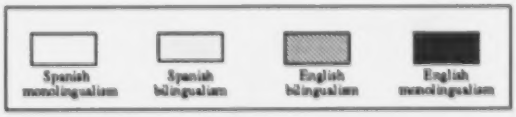


Figure 7.14
Language Shift by Native Born in the USA, Other States, 1976





California, rates of English monolingualism appear to be declining over time.

Small sample sizes also affect the regularity of the curves presented in Figure 7.12 for Illinois. Nonetheless, two features of this figure stand out clearly. On the one hand, the anglicization rates are very high, ranging from approximately 70 percent for persons aged 15-39 to 100 percent of the 10-14 year olds. On the other, English monolingualism has been declining over time. While some 40 percent of the three oldest age groups were monolingual in English, only 20 percent of the 15-19 year olds have abandoned the Spanish language.

In Colorado (Figure 7.13) the anglicization process has advanced very rapidly. While only 55 percent of the oldest group made a language transfer to English, all the children aged 4-19 have already done so. It also appears that rates of English monolingualism are increasing over time, although it is difficult to predict how much higher the final monolingualism rate of the 15-19 year olds will be. It may be that the 40 percent rate observed for the 20-29 year old cohort does in fact represent the final rate which will be attained by younger age groups. On the other hand, it may be explained as an aberration produced by sampling error. In any case, it appears that the Spanish language group will shortly disappear in Colorado, unsupported by new immigration and undermined by anglicization rates of 100 percent. The Hispanic community in this state will soon become a typically American ethnic group.

The native born in the remaining states (Figure 7.14) are characterized by declining rates of English monolingualism. It would appear that the anglicization rate has remained stable at approximately 70 percent.

The examination of Figures 7.7 to 7.14 reveals some variation in the placement and slope of the language shift curves for native-born hispanophones in the different regions of the United States. As a general rule, however, it may safely be said that anglicization rates are never low. Even in Texas, the most conservative of the regions examined, the anglicization rate exceeds 50 percent for adolescents and is undergoing the same long-term increase observed in most other regions. In fact, it appears that there has been some narrowing in regional rates of anglicization over time. The current rate, that which characterizes teenagers, varies between 70 and 100 percent in most regions, including those which receive the highest number of new immigrants (California: 85 percent; Northeast: 70 percent; Illinois: 100 percent).

It appears, however, that English monolingualism among the native born is declining in several of the regions examined. Perhaps this is one area in which continuing high levels of immigration have had an impact. When immigrants give birth to native-born children of Spanish mother tongue, fewer of them now abandon that language than in the past. This is true in spite of the constantly rising rates of anglicization, because language transfer generally takes the form of English bilingualism.

Conclusion

The data presented in this chapter reveal that immigrants settling in most regions of the United States experience a relatively similar language shift process, although rates of language shift appear to be somewhat lower in Texas and in New Mexico than they are in other regions of the country. The net effect of these lower rates is nonetheless inconsequential since the two regions together receive less than 10 percent of all new immigrants, a fact which will lead to a decline in the relative importance of these two regions in the near future. On the other hand, rates of shift are higher in Colorado and in the 40 states which are not traditional areas of Hispanic settlement. The share of immigrants moving into these latter regions appears to be increasing over time, attaining approximately 15 percent for the 1975-1976 period. Such changes in immigrant preferences for each region appear to encourage still higher rates of language shift in the future.

With respect to the native born, Texas and New Mexico are once again characterized by lower than average rates of language shift while most other regions are characterized by higher than average rates of language shift, notably California and Illinois but also New York and Florida. Since these four regions are now those which attract most new immigrants, it appears that both new immigrants and their children will be exposed to rates of anglicization in the future even higher than those observed in 1976.

The figures presented in this chapter also reveal some differences between regions with respect to the evolution of anglicization among the native born, although nearly all regions for which data is available show a persistent increase in the rate of anglicization over time. For example, while anglicization rates

appear always to have been high in California, they were once much lower in Texas than they are now. Again, they have been rising more rapidly in Texas than they have in New Mexico but not as fast as they have risen in Arizona. It appears, however, that rates of English monolingualism may be declining in a number of regions, a function perhaps of the impact of continuing immigration on the language skills of the native born.

The data examined do not, however, suggest that Spanish can survive in any area of the United States in the absence of continued immigration. Language shift among both immigrant and native-born hispanophones is simply too extensive to ensure the long term survival of the group in any region of the country, most particularly those which have witnessed the most important increases in the size of the Spanish language group. In most areas of the United States approximately 70 percent of the native born currently are adopting English as their usual language (85 percent in California). As a result the native-born generation will largely complete the movement to English as one's usual language, irrespective of the degree of retention of Spanish by the immigrant generation.

The single exception to this rule concerns the Spanish language group in Texas, the conservative nature of which should not, however, be overestimated. For example, the data show that 87.4 percent retain Spanish as their usual language (Table 7.5). Should 50 percent of their children make English their usual language, only 43.7 percent (87.4 x .5 = 43.7) of the third generation would have Spanish for their mother tongue, of whom only one-half would retain it if the anglicization rate remains fixed at 50 percent. Thus, only 21.9 percent of the grandchildren of immigrants would remain Spanish-dominant. Were the anglicization rate fixed at 60 percent, only 14 percent of the grandchildren would speak Spanish as their principal language of use (87.4 x .4 x .4 = 14).

However, the data reveal that anglicization rates are rising in all regions of the country, including Texas. As a result, the process of language shift will tend more and more to approximate a two-generation model of language shift, at least with respect to Spanish as the principal language of use. Under these circumstances, few children born to the children of immigrants (their grandchildren) will have Spanish for their mother tongue. Such a model already fits the linguistic situation observed in Colorado, Illinois, and California. *If anglicization continues to increase by 4 to 5 percentage points per decade in all regions of the country, a two-generation model will come to describe the language shift process in all regions of the United States (except Texas) by the turn of the century.*

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 8

The Urbanization Of the Spanish Language Population

In our previous study of the French language group, we observed that native-born Franco-Americans were more likely to live in non-SMSA regions than were immigrants of French mother tongue. As a result, the proportion of native-born francophones living in urban areas will increase over time, a finding associated with constantly rising rates of the anglicization of the French-language population. In this chapter we shall see whether residence in urban or rural areas has a similar effect on the language shift patterns of hispanophones.

Urban residence is defined for the purposes of this study as residence in one of the 120 Standard Metropolitan Statistical Areas (SMSAs) identified on the SIE sample tape, i.e., those SMSAs with a 1970 population of at least 250,000 persons. Persons not living in such areas are considered, for purposes of this study, to be residing in rural (i.e., non-SMSA) areas. Technically speaking, this is not always the case, since they may live in smaller SMSAs which were not identified on the SIE sample tape.

Urban-Rural Location of the Spanish Origin Group

Table 8.1 shows that the Spanish origin group, unlike FrancoAmericans, is heavily concentrated in the larger urban areas. More than two-thirds of the native born and seven immigrants in eight lived in SMSA regions identified in the SIE.

Further, the data show that approximately 9 in 10 immigrants have settled in the largest urban areas since the beginning of the 1960s (Table 8.2). This finding reveals the continuing preference of Hispanic migrants for large metropolitan areas. The slightly lower figures observed for previous periods reflects a change in the residential choices of recent Hispanic immigrants, most particularly a decline in the number of those who choose to settle in the rural areas of the state of Texas[1].

Language Use

The language shift patterns of both immigrant and native-born hispanophones are presented in Table 8.3. As might have been expected, the data reveal that native-born hispanophones living in large urban areas have higher rates of language shift of all types than do those living in non-SMSA areas. Both forms of anglicization, English monolingualism and English bilin-

gualism, are more frequently found in urban areas; Spanish monolingualism is more likely to be observed in rural areas[3].

The data also reveal that immigrants of Spanish mother tongue living in large urban areas are more anglicized than are those residing in non-SMSA areas. Although the rate of English monolingualism is slightly lower in the urbanized areas, the total rate of anglicization is higher; similarly, the rate of Spanish monolingualism is considerably lower. One must conclude that hispanophone immigrants in the large American cities either undergo substantial pressures to become English-speaking or that they manifest an exceedingly strong desire to do so. In any case, the heavy concentration of Hispanic immigrants in the major cities does not impede their linguistic integration into the English language group.

Nativity Profile of the Hispanophone Population in Selected SMSAs

If the large majority of the Spanish language group live in only ten states and most live in large urban areas, it follows logically that most Hispanics live in a relatively small number of large cities. In fact, as is shown by Table 8.4, nearly 4.2 million persons of Spanish mother tongue resided in only nine major metropolitan areas, i.e., nearly 60 percent of the total hispanophone population[3]. Of these, nearly 1.4 million lived in the New York metropolitan area[4], and more than 1 million in the general area surrounding Los Angeles[5]. Thus, approximately one-third (31.3%) of all U.S. hispanophones live in only two metropolitan areas.

Table 8.4 also reveals that the composition of the hispanophone population varies considerably from one major city to another. Only in the three Texas cities of San Antonio, Houston, and El Paso do a majority of hispanophones claim to be native born. Nearly 85 per cent of those living in Miami[6] are foreign born, as are nearly 70 per cent of those residing in the New York metropolitan area. In the remaining cities, Los Angeles, Chicago[7], San Francisco[8], and San Diego, just over half the population is composed of immigrants.

This table also reveals substantial differences between the major cities in terms of the time of arrival of immigrants. In San Diego, for example, more than half of all immigrants arrived during the 1970-1976 period. A similar situation obtains for Los Angeles where nearly half of all immigrants (and one-fourth of the total hispanophone group) arrived in the period from 1970 to early 1976[9]. In most other major urban areas, Hispanic immigration is more evenly spread over time.

The impact of continued immigration can be readily seen by examining Table 8.5. First of all, the share of immigrants gained by the nine major centers has tended to increase over time. Approximately three in four immigrants who arrived during the 1970s chose to live in one of these metropolitan areas, and that figure has grown. Only in the last period does the attraction of these major centers appear to have stabilized. It also should be noted that the growth of the Spanish language population in these nine cities appears to have taken place largely at the expense of non-SMSA areas.

This table also reveals the continued attraction of the New York metropolitan area for Spanish language

Table 8.1

Nativity Profile of the Spanish Origin Group by Place of Residence, United States, 1976

Place of Residence	Native Born (%)	Immigrants (%)	Total (%)
Non SMSA	31.2	12.4	24.7
SMSA	68.8	87.6	75.3
Total	100.0	100.0	100.0
N	7,232,690	3,820,910	11,053,600

Source: SIE 1976

Table 8.2

Place of Residence of the Spanish Origin Group by Period of Immigration, United States, 1976

Place of Residence	Before 1950	1950-1959	1960-1964	1965-1969	1970-1976
Non SMSA (%)	20.0	14.6	11.8	8.1	10.0
SMSA (%)	80.0	85.4	88.2	91.9	90.0
Total (%)	100.0	100.0	100.0	100.0	100.0
N	535,300	696,060	523,100	816,850	1,249,600

Source: SIE 1976

Table 8.3

Language Use by Place of Residence and Nativity, Persons of Spanish Mother Tongue, United States, 1976

Native Born	Non SMSA (%)	SMSA (%)	Total (%)
English Monolingual	8.3	12.9	11.1
English Bilingual	31.3	46.0	40.8
Spanish Bilingual	49.6	34.3	39.8
Spanish Monolingual	10.8	6.8	8.3
Total (%)	100.0	100.0	100.0
N	1,247,930	2,241,310	3,489,240

Immigrant	Non SMSA (%)	SMSA (%)	Total (%)
English Monolingual	4.8	3.4	3.6
English Bilingual	15.9	20.5	20.0
Spanish Bilingual	39.7	42.1	41.8
Spanish Monolingual	39.6	34.0	34.6
Total	100.0	100.0	100.0
N	436,080	3,115,990	3,552,070

Source : SIE 1976

Table 8.4

Nativity Profile by Place of Residence:
Persons of Spanish Mother Tongue,
Selected SMSAs, United States, 1976

	New York	Los Angeles	San Antonio	Miami	Chicago
Native Born	**31.1 %**	**43.2 %**	**80.2 %**	**15.3 %**	**45.8 %**
Immigrants	**68.9**	**56.8**	**19.8**	**84.7**	**54.2**
Before 1960	25.9	13.4	10.9	13.3	17.9
1960-1964	8.4	5.0	2.1	20.9	5.9
1965-1969	15.1	12.0	3.4	31.2	14.5
1970-1976	19.5	26.4	3.4	19.3	15.9
Total	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**
(N)	**1,363,450**	**1,008,650**	**323,520**	**443,490**	**324,070**

	San Francisco	El Paso	San Diego	Houston
Native Born	**46.5 %**	**54.9 %**	**42.3 %**	**66.1 %**
Immigrants	**53.5**	**45.1**	**57.7**	**33.9**
Before 1950	19.4	15.3	17.4	6.9
1950-1959	3.2	11.6	5.5	1.8
1960-1969	12.4	4.4	2.2	5.2
1970-1976	18.5	13.8	32.6	20.0
Total	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**
(N)	**228,760**	**199,880**	**163,380**	**115,082**

Source: SIE 1976

Table 8.5

Place of Residence by Period of Immigration, Persons
of Spanish Mother Tongue, Four Years of Age
and Older, United States, 1976

	Period of Immigration				
SMSA	**Before 1950**	**1950-1959**	**1960-1964**	**1965-1969**	**1970-1976**
New York	26.7%	34.5%	25.3%	28.4%	24.9%
Los Angeles	17.6	7.2	10.2	15.8	23.3
San Antonio	3.5	2.7	1.4	1.4	0.9
Miami	3.7	5.9	18.8	17.9	7.4
Chicago	2.7	6.7	3.8	6.1	4.4
San Francisco	5.0	3.0	1.4	3.7	3.6
El Paso	2.9	2.4	4.7	1.1	2.4
San Diego	0.7	3.7	1.8	0.5	4.6
Houston	0.8	0.6	0.4	0.8	2.1
Other SMSA	15.8	17.8	16.8	14.5	14.5
Non-SMSA	20.6	15.5	15.4	9.8	11.9
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
(N)	**498,050**	**663,270**	**492,950**	**770,110**	**1,127,940**

Source: SIE 1976

immigrants. This single urban area received at least one-fourth of all such immigrants in any given time period. On the other hand, the data also document the growing attraction of Los Angeles as a major Hispanic center. Approximately one-fourth of all immigration during the 1970s was directed to this region, and the figure has been rising constantly since 1950.

No other Hispanic center exercises the attraction of these two cities. Immigration to Miami, for example, appears more unpredictable, governed as it is by the ups-and-downs of the U.S. relationships with Central American governments and Cuba. Nonetheless, Miami appears to be emerging as a third major center of the Spanish language community, home to 7.4 percent of the immigrants who arrived during the latest period covered by the study. Since the Mariel Cubans arrived after the SIE was completed, it is clear that the Spanish language population of Miami is much larger now than it was in mid-1976.

The greater Chicago area also has attracted Spanish language immigrants since the beginning of the 1950s. However, the percentage of immigrants which have chosen to settle in Chicago has varied by period. It appears, however, that Chicago is becoming a fourth major urban center of Hispanic settlement.

With respect to the remaining large cities, San Francisco and El Paso have generally maintained their relative attraction for new immigrants, while San Antonio no longer appears to be a desirable settlement area. On the other hand, San Diego and Houston appear to exercise greater attraction now than they did in the past.

On the whole, however, it would appear that continuing Spanish language migration will lead to ever increasing concentrations of Hispanics in a very few major metropolitan areas, notably New York, Los Angeles and Miami. Further, only eight major urban centers (now excluding San Antonio) will attract three-fourths of all new Spanish language immigrants who will settle in the United States.

Language Shift in Selected SMSAs

Language use of the immigrant population in the nine SMSAs is presented in Table 8.6. The data reveal few differences in the rates of English monolingualism, except for the higher rates observed in San Francisco and to a lesser extent in Houston. Similarly, the total rate of anglicization generally hovers around 20 percent. Once again, it is markedly higher in San Francisco and in San Diego.

The greatest differences between cities appear to occur with respect to the incidence of Spanish monolingualism, highest in Houston, Los Angeles, and El Paso, lowest in Miami (and San Francisco). Not all of these differences can be attributed to differences in the time of arrival of immigrants, as can be readily seen by comparing the language shift patterns of immigrants who settled in Los Angeles as opposed to San Diego (or in San Francisco in comparison to Chicago).

Some greater differences in anglicization rates are found among the native born (Table 8.7). English monolingualism is more frequently found in San Francisco and in Los Angeles than elsewhere, less frequently observed in New York, San Diego and the three Texas cities. Total anglicization rates are highest in the three California cities and lowest in New York, San Antonio, and El Paso. In Houston more than half the native born are, on the other hand, anglicized.

Spanish monolingualism among the native born is, as we have seen, relatively rare. However, it is more frequently found in the New York area than elsewhere, although more than 10 per cent of the native born in Miami and El Paso reportedly do not speak English on a regular basis. While these figures do not seem exceptionally high, they may indicate the presence of a sizeable group of people in particular need of Spanish language services or, in the case of children, continued assistance with English language educational programs.

Conclusion

The data presented in this chapter reveal that hispanophones are largely concentrated in a small number of metropolitan areas, most notably New York and Los Angeles. Both the native born and immigrants are more heavily anglicized in large urban areas than they are in smaller urban or rural areas. *These findings suggest that neither large numbers nor a continuous flow of new immigrants is sufficient to slow the integration of Hispanics into the English language group.*

For example, the constant growth of the Spanish language community in the Los Angeles area is nonetheless associated with the anglicization of immigrants at rates comparable to those observed in other large cities. Similarly, native-born hispanophones are more likely to be anglicized in Los Angeles than in most other major cities. If this situation may serve as a relevant example, it appears that Hispanic immi-

Table 8.6

Language Use of Immigrants: Persons of Spanish Mother Tongue Four Years of Age and Older by Place of Residence, United States, 1976

Language Use	New York	Los Angeles	San Antonio	Miami	Chicago
English Monolingual	1.7%	2.2%	1.8%	1.4%	1.9%
English Bilingual	21.6	18.6	17.2	16.8	20.4
Spanish Bilingual	45.9	33.7	45.8	56.3	40.0
Spanish Monolingual	30.8	45.5	35.2	25.5	37.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%
(N)	933,470	569,820	63,110	371,600	173,120

Language Use	San Francisco	El Paso	San Diego	Houston
English Monolingual	15.9%	1.3%	4.0%	8.1%
English Bilingual	29.9	18.2	26.9	7.5
Spanish Bilingual	35.2	39.7	40.3	33.2
Spanish Monolingual	19.0	40.8	28.8	51.2
Total	100.0%	100.0%	100.0%	100.0%
(N)	120,510	89,110	92,590	39,050

Source: SIE 1976

Table 8.7

Language Use of the Native Born: Persons of Spanish Mother Tongue, Four Years Old or More by Place of Residence, United States, 1976

Language Use	New York	Los Angeles	San Antonio	Miami	Chicago
English Monolingual	6.8%	20.7%	5.9%	10.5%	15.6%
English Bilingual	48.5	47.2	34.5	51.2	46.2
Spanish Bilingual	37.0	23.9	54.0	22.0	31.9
Spanish Monolingual	7.7	8.2	5.6	16.3	6.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%
(N)	331,390	336,860	242,940	47,980	109,100

Language Use	San Francisco	El Paso	San Diego	Houston
English Monolingual	26.0%	7.2%	5.8%	7.9%
English Bilingual	48.1	25.9	60.5	47.7
Spanish Bilingual	22.1	53.6	25.0	39.6
Spanish Monolingual	3.8	13.3	8.7	4.8
Total	100.0%	100.0%	100.0%	100.0%
(N)	95,760	97,190	62,120	62,950

Source: SIE 1976

grants and their native-born children are strongly motivated to become English-speaking (instead of simply learning and speaking that language).

The data presented in this chapter also have a bearing on the future of the Spanish language group. Since nearly nine in 10 immigrants settle in the larger cities, Hispanic populations in the non-SMSA areas are not being reinforced by the arrival of new immigrants. As a result, the Spanish language will become less important outside the major urban centers, particularly New York and Los Angeles, as those who speak Spanish in non-SMSA areas become English-speaking or, in the case of older persons, die. In the long run the Spanish language will become still more an urban phenomenon than it now is, unless, of course, those now living in metropolitan areas spread out into the non-SMSA areas of the country.

Further, these data suggest that the language shift patterns of new immigrants should not be projected as a function of national data. Rather, most immigrants will settle in major urban centers where the rate of language shift is higher than it is for the nation as a whole. This will appear to be still more true in the future, since changing preferences in residence patterns are leading Hispanics to avoid regions where Spanish is better preserved (El Paso, San Antonio, rural Texas) and to settle in regions where anglicization is more frequent (Los Angeles, Houston, San Francisco).

As the native-born population living in non-metropolitan areas declines in importance, the total anglicization rate of the native born increasingly will come to resemble the anglicization rate of those living in the larger SMSA areas. It is for this reason that we shall use the SMSA rates of language shift when projecting the size and composition of the Spanish language population.

Notes:

1. Although 10.4 percent of all immigrants who arrived before 1950 settled in this region, the figure drops to only 7.3 percent of those who came in the 1950s. Since then, the proportion of new immigrants settling in rural Texas has never exceeded 4.8 percent for any five-year period.
2. These differences are partly explained by the fact that a large proportion of the native born living in non-SMSA areas live in Texas, a region which we have shown to be particularly retentive of the Spanish language.
3. As can be seen from Table 8.3, the total population of Spanish mother tongue numbers approximately 7 million persons.
4. Also includes Nassau-Suffolk, Jersey City, Patterson and the New Brunswick-Perth Amboy-Sayreville SMSAs.
5. Also includes Anaheim, Oxnard-Ventura, and the Riverside-San Bernadino-Ontario SMSAs.
6. Includes Fort Lauderdale SMSA.
7. Includes Gary, Indiana, SMSA.
8. Includes San Jose and the Vallejo-Fairfield-Napa SMSAs.
9. This finding may explain why nativist sentiment appears to be more widespread in Southern California than elsewhere in the United States. While the percentage of recent immigrants is also extremely high in Houston, it should be noted that most hispanophones in this city are native born.

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 9

Ethnic Origins Of the Spanish Language Population

The population which speaks Spanish as a first or second language is diverse in terms of ethnic origins. Generally speaking, the Spanish language group is considered to be principally composed of persons of Mexican, Puerto Rican, and Cuban origin. Many groups of Central and South American origin are also present, together with the descendants of those living in parts of the Spanish Empire or the Mexican republic appropriated by the United States. None of these latter groups appear to have attained the same public recognition as have those coming from Cuba, Puerto Rico, and Mexico.

This report does not cover, at least not as one of its major themes, the special situation of the Hispanic ancestry group. We are not, for example, interested in counting the number of persons of Hispanic ancestry who live in English monolingual settings[1]. The topic of ethnic and national origin is not, however, totally devoid of interest to those concerned with language retention and shift. While our principal concern in this chapter focuses on differences in the rate or structure of anglicization among the major Hispanic ancestry groups, we also are interested in examining the characteristics of persons of non-Hispanic ancestry who live in settings where the Spanish language is present as first or second language.

Respondents to the SIE questionnaire were forced to choose their ethnic ancestry from a limited series of categories[2]. Based upon the categories defined by the SIE, we have considered five principal Hispanic groups: Mexican, Puerto Rican, Cuban, Central and South American, and Other Hispanic ancestry. Other groups retained for analysis include persons of European, Amerindian, Black, Asian, and Arab ancestries.

Before proceeding to our analysis, we should note that the claiming of a specific ethnic origin is much less reliable than are data referring to linguistic origins and practice. In the case of South Americans, for example, the time period used as a reference point for the selection of an ethnic identity is extremely important. Many South Americans with ancestors who came from Italy or Germany may claim what we have described as "European" ancestry, while others with the same background may view their identity as more closely determined by their national origin. These latter may declare Argentinian or Bolivian ancestry. We should therefore treat ethnic origin data as being somewhat more approximate than data concerning language practice, age, place of birth, etc.

Table 9.1

Ethnic Group by Region:
Spanish Origin Group, United States, 1976

Ethnic Group	Northeast	California	Texas	Florida
European	3.4 %	2.8 %	1.9 %	5.9 %
Mexican	0.9	76.0	90.1	3.4
Puerto Rican	54.5	2.2	0.5	5.1
Cuban	8.3	1.4	0.2	58.0
South/Central American	15.2	6.2	0.2	6.8
Other Spanish	10.3	3.8	1.5	14.1
Amerindian	0.1	0.0	0.3	0.0
Black	1.8	0.5	0.2	0.0
Asian	0.3	0.2	0.0	0.0
Arab	0.1	0.1	0.0	0.0
Other non-Hispanic	5.1	6.8	5.1	6.7
Total	100.0 %	100.0 %	100.0 %	100.0 %
(N)	2,025,910	3,142,570	2,606,480	712,140

Ethnic Group	Illinois	Colorado	New Mexico	Arizona
European	3.3 %	3.6 %	1.4 %	4.3 %
Mexican	46.8	60.7	47.5	80.1
Puerto Rican	30.4	0.7	0.2	0.8
Cuban	4.8	0.9	0.0	0.0
South/Central American	4.5	1.5	0.3	0.2
Other Spanish	1.8	18.5	44.5	5.5
Amerindian	0.2	0.6	0.8	2.0
Black	1.8	0.8	0.2	0.3
Asian	0.0	0.1	0.0	0.1
Arab	0.2	0.0	0.0	0.0
Other non-Hispanic	6.2	12.6	5.1	6.7
Total	100.0 %	100.0 %	100.0 %	100.0 %
(N)	413,870	237,670	412,770	358,610

Ethnic Group	Others	Total
European	6.8 %	3.3 %
Mexican	33.9	54.2
Puerto Rican	15.0	13.8
Cuban	5.2	6.4
South/Central American	9.6	6.2
Other Spanish	9.9	7.6
Amerindian	0.5	0.3
Black	2.5	0.9
Asian	0.4	0.2
Arab	0.0	0.0
Other non-Hispanic	16.2	7.1
Total	100.0 %	100.0 %
(N)	1,145,310	11,055,330

Source: SIE 1976

The Spanish-Language Origin Group: Its Regional Composition

Table 9.1 presents the structure of the population in contact with the Spanish language in each of the nine regions analyzed in Chapter 7. An examination of the summary data presented in the final column of Table 9.1 shows that more than half the Spanish language origin group is Chicano/Mexican in origin. Puerto Ricans compose 13.8 percent of the total, followed by the three remaining Hispanic ancestry groups (from 6.2 to 7.6 percent each). Consequently, nearly nine in 10 persons in the language origin group appear to come essentially from Spanish origins.

On the other hand, 7.1 percent of the entire group could not be classified using the categories presented by the Bureau of the Census[3], most likely those who persisted in declaring an American ancestry[4]. An additional 3.3 percent declared some European ancestry, while nearly 1 percent said they were Black. Few said they were Amerindian, Asian, or Arab.

This table also reveals wide differences in the regional composition of the language-origin group. Puerto Ricans, Cubans, and Central and South Americans are absent in all the states of the Southwest with the exception of California, while Mexican ancestry persons are not found in the Northeast. They do, however, account for more than 90 percent of the Spanish-language origin group of Texas, 80 percent of those residing in Arizona, and more than three-quarters of the group living in California.

The composition of the population in other regions is somewhat more heterogeneous in terms of ethnic origins. While Puerto Ricans, Cubans, and persons of Mexican ancestry respectively account for more than half the population in the Northeast, Florida, and Colorado, sizeable concentrations of other ethnic groups are also present. In New Mexico the population is evenly divided between those claiming Mexican ancestry and those claiming Other Hispanic origins (nearly all of whom are descendants of original Spanish settlers); while in Illinois nearly one-half the population claims Mexican origin, and one-third, Puerto Rican.

Language Background by Ethnic Origin

The data presented in Table 9.2 reveal very clearly that not many persons of European, Amerindian, Black, Asian, Arab, and Other ethnic origins have

Table 9.2

Ethnic Group by Mother Tongue: Persons of Spanish Origin Group, United States, 1976

Ethnic Group	Mother Tongue				Weighted
	English (%)	Spanish (%)	Others (%)	Total (%)	
European	73.1	11.1	15.8	100.0	367,350
Chicano/Mexican	28.5	71.4	0.1	100.0	5,961,780
Puerto Rican	17.0	83.0	0.0	100.0	1,521,520
Cuban	6.2	93.7	0.1	100.0	709,220
Central/South American	13.7	86.1	0.2	100.0	689,130
Other Spanish	31.1	68.7	0.2	100.0	833,890
Amerindian	56.2	24.3	19.5	100.0	28,230
Black	84.5	15.5	0.0	100.0	97,830
Asian	19.0	2.6	78.4	100.0	19,890
Arab	38.6	10.2	51.2	100.0	5,010
Other non-Hispanic	75.7	21.3	3.0	100.0	779,980
Total	30.1	68.8	1.1	100.0	11,013,830

Source: SIE 1976

Spanish for their mother tongue. This is an extremely important finding, not only with reference to the understanding of the SIE data but more particularly with respect to the 1980 Census data. *Persons who declare that they are not of Hispanic origin generally do not belong to the Spanish language group, at least not that part of the group which most actively maintains the Spanish language.* As we have seen in previous chapters, most anglophones and allophones do not speak Spanish, even as a second language.

The language characteristics of hispanophones in the larger ethnic groups, presented in Table 9.3, reveal that the non-Hispanic groups are much more anglicized than the five principal Hispanic groups. More than 60 percent of hispanophones in the European and Black groups have been anglicized, a figure substantially higher than that found for the "Other Hispanic" group, the most anglicized of the Hispanic groups. Not only then are non-Hispanic groups more likely to be composed of anglophones; their hispanophone members are more likely to have made language shifts to English. *Methodologically, this finding is extremely important since it suggests that we can safely ignore the contribution of non-Hispanic persons and groups to the Spanish language population*[5].

Nativity by Ethnic Origin

As has become our practice, the remainder of this chapter focuses on the population which had Spanish for its first language. It is, after all, this group which most likely retains Spanish as an important daily language and which accordingly will transmit Spanish to the next generation. Table 9.4 shows that only the Chicano/Mexican ancestry group was largely, at the time of the 1976 survey, born in the United States. Approximately two persons in three of Mexican ancestry reportedly were born in the United States. On the other hand, nearly two-thirds of Puerto Ricans were born on the island; similarly, the overwhelming majority of Cubans and Central and South Americans were immigrants. A majority of those claiming some Hispanic ancestry other than those previously listed were declared to have been native born. Since most live in New Mexico, they are probably descendants of the Spanish and Mexican populations which settled in this region prior to its annexation by the United States.

Language Shift of Hispanic Immigrants

Although not standardized for time of arrival, the data presented in Table 9.5 lead to the conclusion that Mexican immigrants are the least likely to undergo language shift to English. Not only is the total anglicization rate relatively low (16.2 percent); nearly half of all Mexican immigrants do not speak English on a regular basis. The most rapid adjustment, at least in terms of accommodation to the English language environment, appears to have been made by persons of Cuban, Central and South American, and Other Hispanic ancestries; only minor differences appear to separate these groups in terms of rates of language shift to English. While fewer Spanish monolinguals are found in the Puerto Rican group than in others, the total rate of anglicization is less than 25 percent, making it the group which has the second lowest rate of language shift. On the other hand, the Puerto Rican group appears to more closely resemble the three remaining Hispanic groups than it does the Mexican-ancestry population.

In order to compare more directly the rates of anglicization between ethnic groups, we would like to examine language shift as a function of both age at time of arrival and the length of time in which immigrants have resided in the United States. Unfortunately, sample sizes are simply not large enough to sustain such an analysis. As a result, we have decided to standardize time of arrival in the United States, reweighting the data for each ethnic group so that the proportions of immigrants arriving in each specific time period from 1950 to 1976 are the same. Accordingly, differences observed in the figures which follow reflect residual differences between groups once time of arrival has been standardized. Further, since age at time of arrival is the independent variable in the following charts, differences in the shape and location of language shift curves may be directly attributed to ethnic origin effects and other variables which may be related to ethnicity, notably place of residence.

Figures 9.1 and 9.2 present the language practice of Mexican and Puerto Rican immigrants to the United States as a function of their age at time of arrival. Generally speaking, the two figures demonstrate that the patterns of language shift differ very little between the two largest Hispanic groups. Only two differences can be noted: there are larger numbers of Mexican immigrants who remain monolingual in Spanish (approximately 10 percent more) and the rate of angli-

Table 9.3

Language Use by Ethnic Group: Persons of Spanish Mother Tongue, United States, 1976

Language Use	Mexican	Puerto Rican	Cuban	South/Central American	Other Spanish
English Monolingual	7.4 %	5.1 %	1.5 %	4.4 %	14.7 %
English Bilingual	30.5	31.8	28.6	26.2	30.3
Spanish Bilingual	40.4	43.2	43.0	41.2	39.1
Spanish Monolingual	21.7	19.9	26.9	28.2	15.9
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
(N)	3,931,430	1,174,810	641,790	528,250	542,480

Language Use	European	Other non-Hispanic	Total
English Monolingual	22.9 %	24.9 %	7.4 %
English Bilingual	39.3	32.9	30.3
Spanish Bilingual	24.1	33.3	40.8
Spanish Monolingual	13.7	8.9	21.5
Total	100.0 %	100.0 %	100.0 %
(N)	39,700	182,820	7,041,280

Source: SIE 1976

Table 9.4

Place of Birth by Ethnic Origin: Persons of Spanish Mother Tongue, Principal Hispanic Groups, United States, 1976

Ethnic Group	Native Born (%)	Foreign Born (%)	Total (%)
Mexican	65.2 %	34.8 %	100.0
Puerto Rican	32.6	67.4	100.0
Cuban	10.0	90.0	100.0
Central/South American	12.2	87.8	100.0
Other Spanish	53.2	46.8	100.0
Total	49.4	50.6	100.0

Source: SIE 1976

Table 9.5

Language Use of Immigrants: Persons of Spanish Mother Tongue, Principal Hispanic Groups, United States, 1976

Language Use	Mexican	Puerto Rican	Cuban	Central/ South American	Other Spanish	Total
English Monolingual	2.2 %	3.3 %	1.4 %	4.3 %	9.9%	2.9%
English Bilingual	14.0	21.2	24.9	24.7	24.4	19.7
Spanish Bilingual	37.3	49.7	45.0	40.5	37.5	41.9
SpanishMonolingual	46.5	25.8	28.7	30.5	28.2	35.5
Total	100.0 %	100.0 %	100.0 %	100.0%	100.0%	100.0%
(N)	1,366,160	791,450	577,670	463,940	253,730	3,452,950

Source: SIE 1976

Table 9.6

Language Use of Native Born: Persons of Spanish Mother Tongue, Principal Hispanic Groups, United States, 1976

Language Use	Mexican	Puerto Rican	Cuban	South/Central American	Other Spanish	Total
English Monolingual	10.2 %	8.7 %	2.0 %	5.0 %	19.0%	10.5%
English Bilingual	39.2	53.8	62.0	36.6	35.4	40.9
Spanish Bilingual	42.0	29.7	24.0	46.3	40.4	40.2
Spanish Monolingual	8.6	7.8	12.0	12.1	5.2	8.4
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0%	100.0%
(N)	2,565,270	383,360	64,120	64,310	288,750	3,365,810

Source: SIE 1976

Figure 9.1
Language Shift of Mexican Immigrants to the USA, 1950-1976

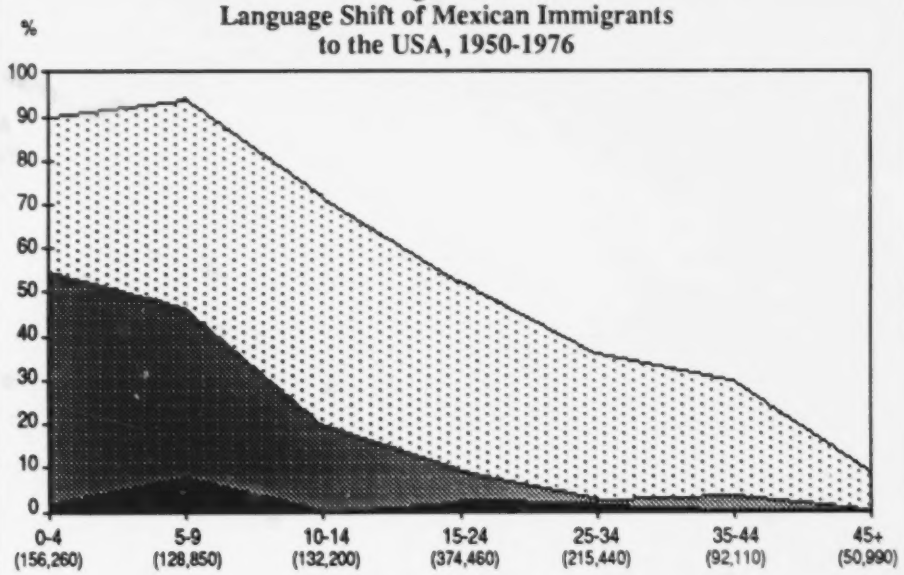
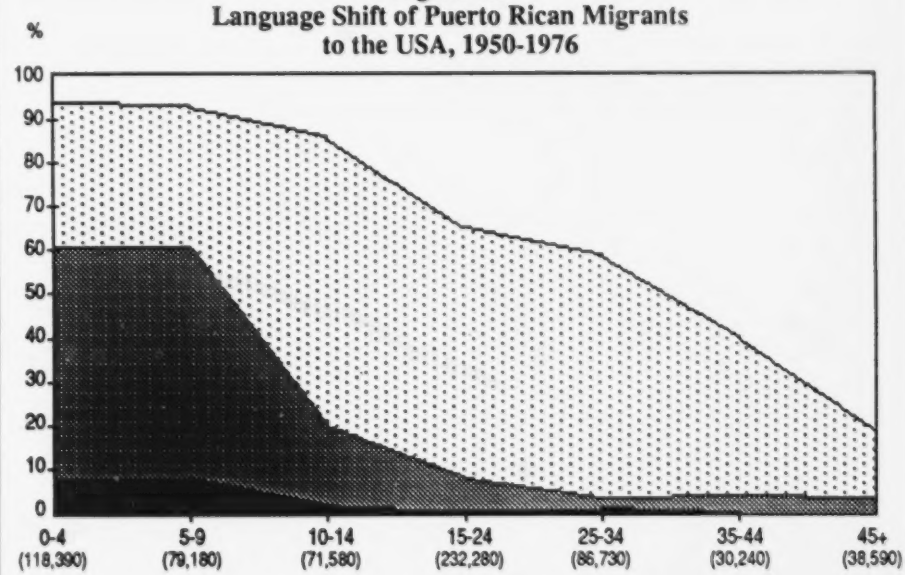
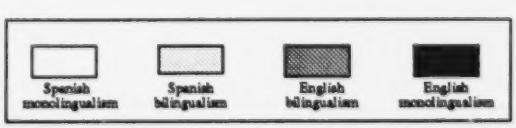


Figure 9.2
Language Shift of Puerto Rican Migrants to the USA, 1950-1976





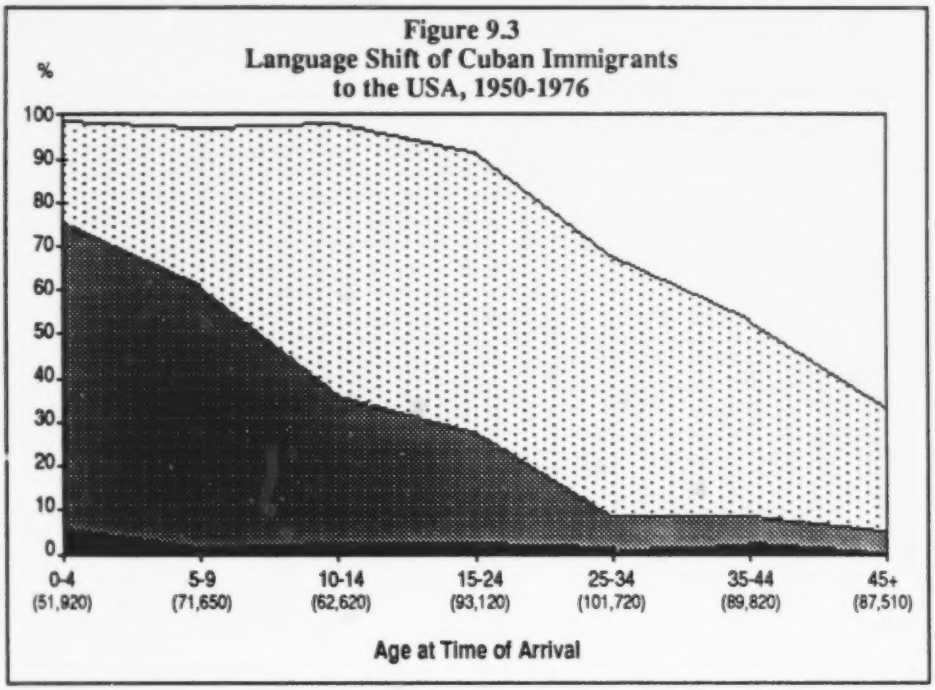


Figure 9.3
Language Shift of Cuban Immigrants
to the USA, 1950-1976
%
100
90
80
70
60
50
40
30
20
10
0
0-4 (51,920)
5-9 (71,650)
10-14 (62,620)
15-24 (93,120)
25-34 (101,720)
35-44 (89,820)
45+ (87,510)
Age at Time of Arrival

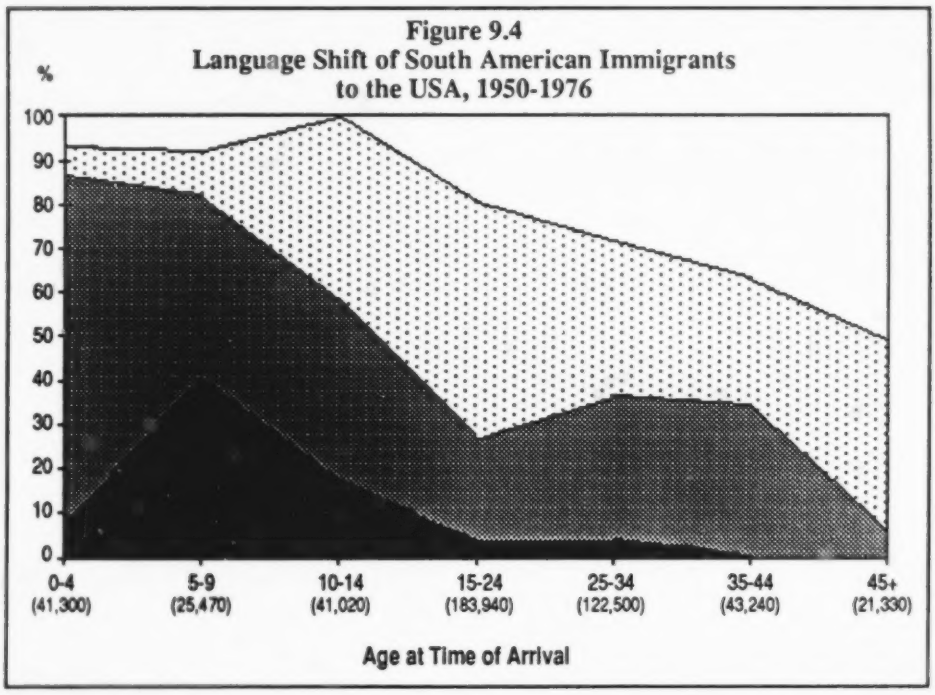


Figure 9.4
Language Shift of South American Immigrants
to the USA, 1950-1976
%
100
90
80
70
60
50
40
30
20
10
0
0-4 (41,300)
5-9 (25,470)
10-14 (41,020)
15-24 (183,940)
25-34 (122,500)
35-44 (43,240)
45+ (21,330)
Age at Time of Arrival

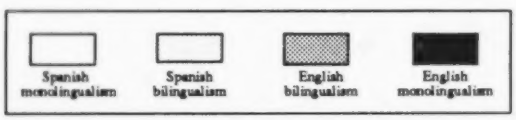

Spanish monolingualism
Spanish bilingualism
English bilingualism
English monolingualism

Figure 9.5
Language Shift of Other Spanish Language Immigrants to the USA, 1950-1976

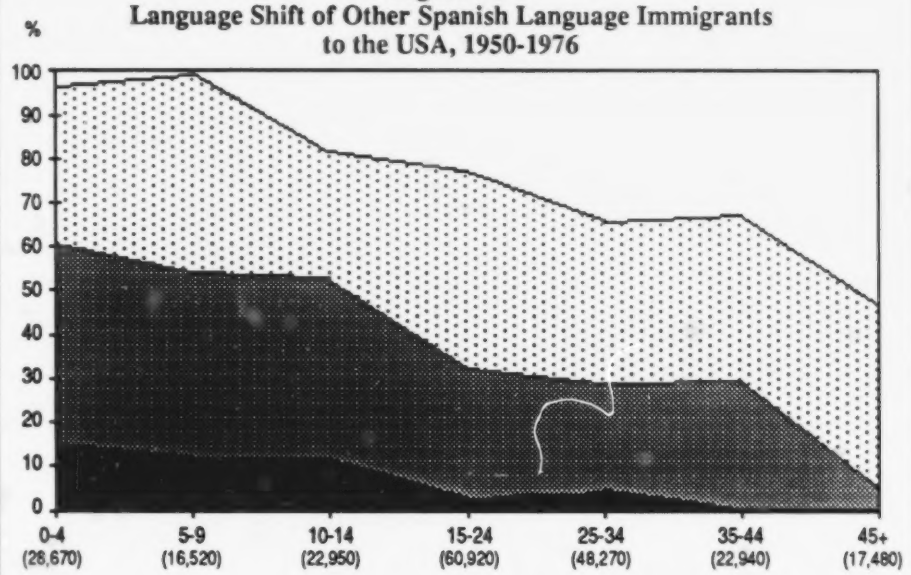
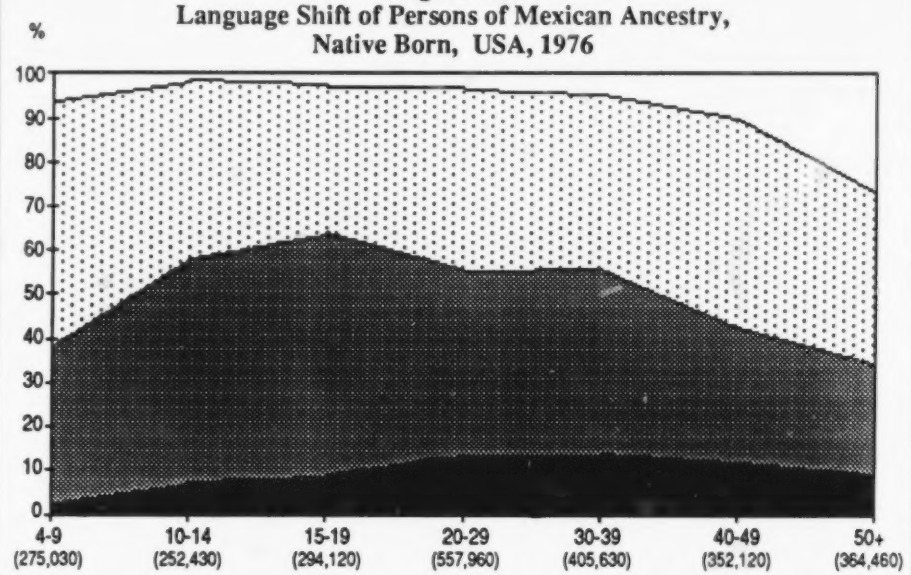
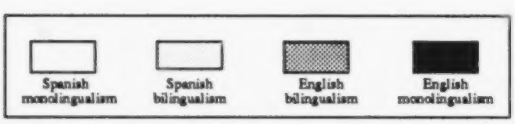


Figure 9.6
Language Shift of Persons of Mexican Ancestry, Native Born, USA, 1976





cization is marginally higher among Puerto Ricans aged 4-9 years of age. Once again, the observed differential is approximately 5 to 10 percent. In general, however, the data suggest very similar patterns of language mobility to English among Mexican and Puerto Rican immigrants.

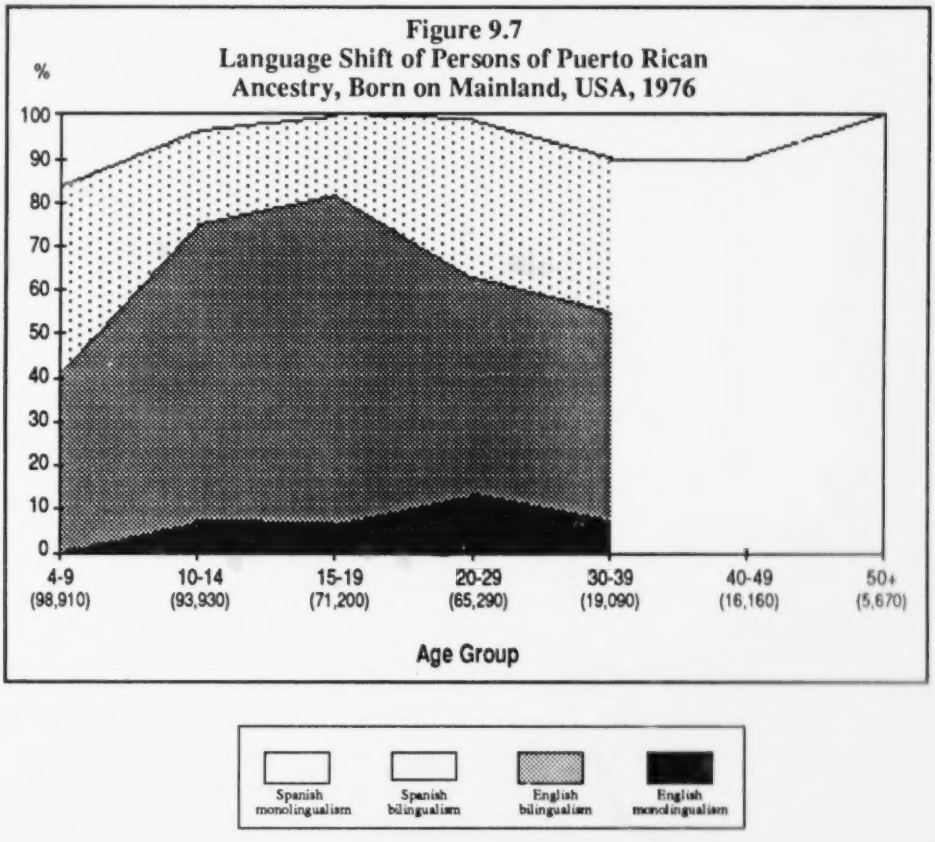
While Figures 9.3 to 9.5 resemble those describing the language shift process of Puerto Ricans and Mexicans, several important differences can be observed. First of all, Spanish monolingualism is much less frequently found in the Cuban, Central and South American, and Other Hispanic groups. Secondly, the rates of anglicization are everywhere higher in these three groups, notably among persons aged 10-14 and 15-24 at the time they arrived in the United States. In fact, apart from Cubans, they are also substantially higher than previously observed for those who were 25 to 44 years of age at time of arrival. Thirdly, rates of English monolingualism also appear higher for the Central and South American and Other Hispanic immigrants, few Cubans having abandoned their mother tongue as a daily language.

On the whole, Figures 9.1 to 9.5 sustain the conclusion that the process of language shift is largely invariant and that age at time of arrival is an important explanatory variable. Nonetheless, they also reveal the presence of some differences in the placement of the language shift curves, some groups adopting English more extensively than others. Whether such differences are explained by cultural factors or by the structure of regional labor markets, it appears that Puerto Ricans and Mexicans better retain the use of Spanish than do the other groups examined in this chapter.

Language Shift of Native-Born Persons in the Principal Hispanic Ancestry Groups

The comparative advantage of the Mexican and Puerto Rican groups in retaining Spanish disappears among the native born (Table 9.6). Approximately half have been anglicized, and ten percent have abandoned the use of Spanish as a daily language. While the total rate of anglicization is higher than that found among Central and South Americans, it is not as high as that observed among the remaining groups. In the

Figure 9.7
Language Shift of Persons of Puerto Rican Ancestry, Born on Mainland, USA, 1976



case of Puerto Ricans and Cubans, the anglicization rate exceeds 60 percent. In general, then, native-born hispanophones appear to undergo comparable rates of language shift.

To examine the possibility that the observed differences may be accounted for by the age structure of the population, additional charts were prepared showing the language practice of the native born as a function of age. Unfortunately, given the extremely small proportion of the population which was native born in the Cuban, Central and South American, and Other Hispanic groups, no conclusive pattern emerged. On the other hand, the fragmentary data obtained for native-born Puerto Ricans suggests that they may have undergone greater language shift to English than have Mexican-Americans of the same age (Figures 9.6 and 9.7). For example, the total anglicization rate for 15-19 year olds stood at approximately 80 percent among Puerto Ricans as compared to just over 60 percent among Mexican Americans.

Conclusion

The data presented in this chapter sustain the popular notion that Mexican Americans in particular appear to maintain the use of Spanish in greater numbers than do those in other groups. When, however, the data are standardized to control for time of arrival, it would appear that Puerto Ricans are nearly as retentive of Spanish as are Mexican Americans. Although fewer differences are observed among the native born, it appears that Mexican Americans undergo somewhat lower levels of language shift than do members of most other ethnic groups[6]. Given, however, the fact that increasing numbers of native-born Mexican Americans in the future will come from the major metropolitan areas of the United States, one may expect that ethnic differentials among the native born will tend to diminish over time.

The conclusion that Mexicans and Mexican Americans are more likely to maintain the use of Spanish rests on the premise that declarations of place of birth are equally reliable among the ethnic groups. This is clearly unlikely. For example, since all Puerto Ricans are by birth citizens of the United States, there is no reason for island-born Puerto Ricans to wish they had been born in the United States. Puerto Ricans have no incentive to misreport their place of birth.

On the other hand, it is likely that some Mexican immigrants erroneously claimed native birth to ensure that their right to reside in the United States would not be questioned[7]. As we have shown in this chapter, adult Mexican immigrants generally speak Spanish as their principal language, while native-born hispanophones of Mexican ancestry usually speak English. *Were as few as 5 or 10 percent of the so-called native born actually born outside the United States, the presumed differentials between Mexican Americans and Puerto Ricans would disappear.* And were the figure to attain 20 to 25 percent in the Mexican ancestry group, their anglicization rate would approximate those of native-born Cubans or Other Hispanics.

Given our inability to determine the extent to which erroneous declarations of native birth plague the SIE data, it seems prudent not to make too much of the more retentive character of the Mexican-origin group. It is likely that erroneous declarations account for most or all of the Puerto Rican/Mexican differential. Consequently, the anglicization process of native-born Hispanics appears to be relatively universal, only small differentials separating the principal Hispanic-origin groups.

Notes:

1. Veltman (1983) shows that 33 percent of the native-born Hispanic population aged 14 and over in 1976 did not speak Spanish (Table 3.1).
2. Nor were double entries permitted. From the viewpoint of completeness, these procedures may be viewed as unsatisfactory. Nonetheless, they facilitate the task of the data analyst, who does not have to decide how to treat double and triple declarations of ethnic origin.
3. Some belonged to groups which the Bureau of the Census found too small to classify.
4. See Appendix 1 for a more detailed discussion.
5. Such persons are included in our analysis because they can be identified as belonging to the Spanish language group on the basis of their mother tongue. When, however, no mother-tongue data are available, persons of non-Hispanic ancestry should be excluded from the analysis, since so few are in fact members of the Spanish language group. This is most clearly the case with 1980 United States Census data.
6. The small amount of data available on native born Central and South Americans suggests that they have still lower rates of anglicization. It should be observed, however, that these sample sizes are extremely small and that the differences observed are surely not statistically significant.
7. The same logic applies to Central and South Americans.

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 10

The Spanish Language Group: Modeling Population Growth

Modeling the population growth of a minority language group is not an easy task because a large number of population parameters require estimation. There are, first of all, difficulties which are specific to our problem, for example, the need to estimate rates of movement from Spanish monolingualism to Spanish bilingualism, from Spanish bilingualism to English bilingualism and from English bilingualism, to English monolingualism.

Secondly, there are difficulties which are inherent in any type of multivariate demographic modeling, notably concerning the interaction between subgroup behavior and the standard demographic variables. For example, the demographer would like to have birth and death rates for each specific group defined by age, sex, language characteristics, and place of birth. Unfortunately, no American study would permit us to develop unambiguous birth and death rate parameters for any group defined in part by language.

It should, therefore, be quite evident that our study of the future of the Spanish language group is limited by the quality of the data which we have at our disposal. This is particularly true with respect to two questions, the inability to determine accurately the mother tongue of young children and the probability that some of the declarations of native birth are not accurate. These two problems cause our estimates of the retention of Spanish by both anglophones and hispanophones to be somewhat uncertain.

Our model is also limited by the quality of the population parameters forecast by the U.S. Bureau of the Census. Birth, death, and immigration parameters have been adapted from the Bureau's projections of the size of the Hispanic ancestry group[1], defined by ethno-racial rather than linguistic characteristics.

The Base Population

The 1976 SIE population of persons speaking Spanish as either a first or second language furnishes the baseline data for our population projections. Five-year age groups were established for each sex, time of arrival (including native born), and language group (Spanish monolingual, Spanish bilingual, and English bilingual). Persons who, although of Spanish mother tongue, had become English monolinguals before 1976 were excluded from the model since they no longer belonged to the Spanish language group[2]. Similarly, no counts were made of those who would become English monolinguals during the course of the

period 1976-2001.

Separate records, of course, were kept for each nativity/time-of-arrival category. Native-born English bilinguals of English mother tongue were distinguished from English bilinguals of Spanish mother tongue since the Spanish-abandonment rates vary by mother tongue. Given the hypothesis that little or no further language shift will occur among immigrants who arrived in the United States before 1965, all such persons were entered into a single time-of-arrival category. On the other hand, separate categories were kept for immigrants arriving during the following time periods at mid year: 1965-1969, 1970-1974, 1975-1976, 1976-1981, 1981-1986, 1986-1991, 1991-1996, 1996-2001.

Since the process of sampling introduces random errors into the data, some corrections were made to the original SIE data. The data were altered to approximate a more normal evolution of the principal subgroups, i.e., as defined by age, sex, and language practice[3]. The resulting data set is presented in Table 10.1.

Mortality

The general approach to the estimation of Hispanic mortality adopted in this study relies on data developed by Gregory Spencer of the U.S. Census Bureau. His analysis shows that future hypotheses of Hispanic mortality rates are relatively inconsequential since the size of the Hispanic population depends largely on two factors, future levels of immigration and fertility (Spencer, 1986, page 9). Since we share this point of view, we shall adopt for purposes of this study the middle series of mortality projections prepared by Spencer[4] (Table A2.1). No efforts were made to correct mortality projections for differentials which might be associated with place of birth or language practice.

Fertility

Unfortunately, we did not feel that we could adopt such a simple solution with respect to future estimates of fertility. The Bureau's projections were prepared using all Hispanic women[5], a method which is unsatisfactory for our purposes. In our view the concept of Hispanic origin is much too imprecise to be useful[6]. While the Census approach seems to fit nicely with U.S. definitions of social reality (three "races": White, Black, and Hispanic), it is not well suited to the analysis of linguistic phenomena. It is probable, for example, that monolingual Spanish women give birth to larger numbers of children than do English monolingual women of Hispanic ancestry.

Our approach to differential fertility rates for each language practice group relies heavily on data derived from the 1980 Census. Our first task requires the development of a sample which would eliminate women who likely did not really belong to the Spanish language group (even though they said they spoke Spanish at home).

It seems reasonable to accept as bona fide members of the Spanish language group all immigrants[7] who reportedly spoke Spanish in 1980. Our analysis also suggests that native-born women who spoke Spanish and claimed Hispanic ancestry also belong to the Spanish language group. The imposition of these criterion produces a sample population which is relatively similar to that defined in the SIE.

After dividing these women into those who spoke English well[8] and those who did not[9], we then calculated the mean number of children born to women in each of our five-year age groups (Table 10.2). This table reveals several interesting phenomena. First of all, while the differences in mean family size are negligible among younger women, native-born women aged 35 and older had had more children than did immigrant women[10]. On the whole, nonetheless, these data suggest that while place of birth once played a significant role in the reproductive process, it no longer does.

On the other hand, knowledge of English clearly has an important effect on family size. Women who did not speak English well had substantially more children than did other Hispanic women. One may fix this differential at approximately 25 percent among 20-34 year old women, although 15-19 year old women who did not speak English well had nearly twice as many children as did their peers who did speak English well.

With a view to preparing estimated rates of fertility, we then compared these data to the mean number of children who would be born, using the fertility schedule[11] calculated by Spencer for the year 1982, the base year in his population model. Table 10.3 presents the mean family sizes which Spencer's schedule would produce, together with data on actual family size obtained from the 1980 Census[12].

Examination of this table (see page 91) reveals

Table 10.1

Base Population, Spanish Language Group, United States, 1976

Native Born

Age Group	Male				Female			
	EMT	EUL	SUL	SMono	EMT	EUL	SUL	SMono
0 - 4	184,440	102,000	143,230	38,640	181,890	107,010	152,660	43,560
5 - 9	128,140	97,330	105,900	22,420	128,770	106,270	115,420	22,060
10 - 14	100,110	100,200	92,580	15,440	102,290	112,160	102,800	12,790
15 - 19	74,200	93,580	79,290	11,230	74,190	108,300	88,830	9,250
20 - 24	47,950	77,090	63,630	7,660	48,160	89,140	70,910	7,210
25 - 29	34,740	69,300	60,440	6,590	34,540	79,820	65,960	7,800
30 - 34	20,730	52,030	50,690	5,920	21,340	59,020	53,140	7,940
35 - 39	13,880	42,030	45,820	6,060	14,150	47,350	45,800	8,700
40 - 44	10,160	37,910	45,240	7,330	10,370	41,890	42,690	11,070
45 - 49	8,610	36,680	49,210	9,870	8,520	39,550	44,110	15,370
50 - 54	5,060	22,370	34,180	10,060	5,260	23,800	30,510	13,620
55 - 59	4,510	16,960	30,630	12,310	5,490	18,670	26,540	15,580
60 - 64	3,110	10,070	20,870	11,120	5,310	11,650	17,270	13,620
65 - 69	1,380	3,890	9,730	5,670	3,600	4,570	6,980	7,640
70 - 74	960	2,650	7,630	4,440	3,990	2,900	4,270	6,920
75 - 79	330	1,500	4,730	1,990	2,920	970	1,980	4,360
80 +	0	1,240	3,900	870	2,560	60	1,280	3,440
(N)	**638,320**	**766,840**	**847,680**	**177,560**	**653,340**	**853,130**	**871,140**	**210,940**

Source: SIE 1976 (see text)

continued

Numbers may not sum to column totals due to rounding.

EMT : English Mother Tongue
EUL : English Usual Language
SUL : Spanish Usual Language
SMono : Spanish Monolingual

Table 10.1 (continued)

Immigrants, arrival before 1965

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	-	-	-	-	-	-
5 - 9	-	-	-	-	-	-
10 - 14	6,420	1,790	1,200	9,890	250	-
15 - 19	20,330	9,220	2,730	28,520	7,150	670
20 - 24	23,500	16,170	2,830	30,130	16,760	2,670
25 - 29	25,020	25,040	4,180	29,240	28,710	6,730
30 - 34	32,450	46,810	8,410	34,760	53,370	16,790
35 - 39	25,680	50,040	10,910	25,830	54.550	22,040
40 - 44	20,480	49,200	13,280	20,050	50,200	24,900
45 - 49	18,750	48,150	15,520	18,640	45,990	27,660
50 - 54	16,620	41,350	15,860	15,620	38,010	27,100
55 - 59	8,540	20,680	9,480	7,380	18,930	15,570
60 - 64	8,530	20,730	11,660	6,580	19,610	18,600
65 - 69	7,840	19,970	13,020	5,050	19,590	22,230
70 - 74	6,080	15,960	12,390	3,280	16,490	22,940
75 - 79	3,860	9,950	7,850	1,850	10,420	18,630
80 +	3,140	7,240	5,070	1,570	7,500	17,550
(N)	227,270	382,310	134,390	238,840	387,530	244,070

Immigrants, arrival 1965-1969

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	-	-	-	-	-	-
5 - 9	5,000	6,740	200	11,570	3,580	-
10 - 14	19,120	10,670	190	26,530	5,910	260
15 - 19	18,000	13,960	1,810	19,200	16,150	1,050
20 - 24	11,840	21,140	5,500	14,410	23,420	7,590
25 - 29	10,380	27,840	12,020	11,850	30,970	18,060
30 - 34	5,220	27,190	12,020	5,530	26,260	20,780
35 - 39	3,910	22,750	10,670	3,590	17,640	22,850
40 - 44	2,280	12,300	14,490	4,230	10,430	21,340
45 - 49	2,880	7,670	10,040	330	6,580	15,980
50 - 54	680	6,820	10,770	150	5,600	16,060
55 - 59	360	4,300	12,030	800	2,640	17,380
60 - 64	10	3,340	12,790	-	-	19,380
65 - 69	-	850	4,500	-	-	6,440
70 - 74	-	290	3,310	-	-	4,350
75 - 79	-	-	3,160	-	-	3,840
80 +	-	-	1,800	-	-	2,190
(N)	79,680	165,860	115,660	98,190	149,180	177,550

continued

Table 10.1 (continued)

Immigrants, arrival 1970-1974

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	1,020	5,200	1,910	3,610	3,360	2,870
5 - 9	24,120	24,000	11,720	19,150	27,760	7,910
10 - 14	19,670	28,100	7,200	20,006	24,070	13,410
15 - 19	14,970	29,150	12,950	5,230	27,090	24,020
20 - 24	12,810	30,800	19,200	8,740	25,120	31,460
25 - 29	13,350	33,120	29,680	5,730	27,170	41,000
30 - 34	4,390	17,870	17,470	2,300	12,980	23,890
35 - 39	2,100	15,870	18,340	1,570	10,530	23,680
40 - 44	530	7,290	11,120	590	5,980	12,230
45 - 49	50	4,150	11,890	320	2,520	13,220
50 - 54	-	2,150	10,010	-	1,510	10,880
55 - 59	-	1,000	8,550	-	820	9,030
60 - 64	-	370	6,480	-	310	7,030
65 - 69	-	-	5,700	-	140	6,330
70 - 74	-	-	3,500	-	-	4,310
75 - 79	-	-	1,950	-	-	2,720
80 +	-	-	730	-	-	1,360
(N)	93,010	199,070	178,490	64,570	169,360	235,530

Immigrants, arrival 1975-1976

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	-	590	1,730	-	770	1,970
5 - 9	2,380	5,030	3,320	1,430	6,080	3,480
10 - 14	1,580	5,170	4,430	3,360	6,130	4,550
15 - 19	1,010	4,440	7,820	1,860	5,553	8,440
20 - 24	530	2,800	15,630	1,030	3,660	17,710
25 - 29	570	3,280	13,170	1,090	4,260	14,790
30 - 34	-	1,000	5,850	-	1,480	6,600
35 - 39	-	270	4,270	-	-	5,330
40 - 44	-	-	4,220	-	-	4,940
45 - 49	-	-	1,760	-	-	2,070
50 - 54	-	-	1,690	-	-	1,990
55 - 59	-	-	1,630	-	-	1,910
60 - 64	-	-	1,140	-	-	1,330
65 - 69	-	-	650	-	-	760
70 - 74	-	-	620	-	-	720
75 - 79	-	-	360	-	-	420
80 +	-	-	180	-	-	210
(N)	6,070	22,580	68,470	8,770	27,910	77,220

Table 10.2

Mean Number of Children by Age Group, Place of Birth, and Knowledge of English, Spanish Language Group *, 1980

Foreign Born Women

Age Group	Speak English Well	Do Not Speak English Well	Total
15 - 19	0.12	0.32	0.17
20 - 24	0.71	1.05	0.85
25 - 29	1.46	2.01	1.69
30 - 34	2.10	2.81	2.41
35 - 39	2.59	3.33	2.93
40 - 44	2.89	3.84	3.37
45 - 49	3.11	4.07	3.64

Native-Born Women

Age Group	Speak English Well	Do Not Speak English Well	Total
15 - 19	0.16	0.16	0.16
20 - 24	0.86	1.04	0.87
25 - 29	1.66	1.89	1.67
30 - 34	2.39	2.86	2.41
35 - 39	3.17	3.70	3.19
40 - 44	3.93	4.91	3.99
45 - 49	4.20	5.78	4.36

Source: Census 1980
* See text for definition.

Table 10.3

Mean Family Size by Age of the Mother, Spanish Language Group, 1980

Age Group	1980 Observed Mean	1982 Spencer	Difference
15 - 19	0.17	0.23	-0.06
20 - 24	0.86	0.97	-0.11
25 - 29	1.68	1.77	-0.09
30 - 34	2.41	2.33	+0.08
35 - 39	3.03	2.62	+0.41
40 - 44	3.60	2.72	+0.88
45 - 49	3.92	2.74	+1.18

Sources : Census 1980
Spencer, 1986, Table A-1

several important findings. First of all, the mean number of children already born to women aged 35 and older was already substantially higher than the 1982 projections for births to women their age. This finding suggests that these women had been following fertility schedules which yielded a larger number of children than that currently in effect. Further, the older the women, the greater the differential between current fertility expectations and the fertility schedule which they followed. For example, 45-49 year old women had given birth to 3.93 children by 1980, whereas the current schedule would produce only 2.74 children, a difference of 1.2 children. On the other hand, the difference between past fertility history and current expectations is only 0.1 children in the case of the 30-34 year old women.

Still more interesting is the comparison between achieved and expected fertility among the younger women aged 15-29 in 1980. Their reproductive behavior is extremely important since approximately three-quarters of all child-bearing is completed before women reach 30 years of age. According to Spencer's 1982 data, 25-29 year old women should have given birth to 1.77 children, whereas the 1980 Census found only 1.70 children. Similarly, 20-24 year olds were expected to have 0.97 children; the actual figure was only 0.88 children. Again, 15-19 year olds were supposed to have 0.23 children but only 0.17 children had been born.

These findings are all the more striking since Spencer's calculations are based on all Hispanic women, including monolingual anglophones. We specifically excluded this group, one which may be expected to have still lower birth rates than do the Spanish language components of the Hispanic ancestry population. We had expected the women we selected from the 1980 Census to have higher mean family sizes than Spencer's estimates had projected. Consequently, our analysis suggests that *Hispanic fertility rates are falling more rapidly than estimated by the Bureau of the Census.*

To illustrate this point we have calculated anticipated mean family sizes for each age cohort using the medium hypothesis projected by Spencer for the years 1985, 1990, 1995, etc. As we have already noted, completed family sizes for all groups aged 30 and older will be higher than those estimated using the 1982 standard. If, however, we allow each of these age groups to complete their fertility according to the 1982 estimates, the 45-49 year olds will have given birth to 4.0 children, the 40-44, 35-39 and 30-34 year olds to 3.6, 3.2 and 2.9 children respectively. These figures give some idea of the magnitude of the decline in childbearing on the part of Spanish language women.

Furthermore, it appears that the younger women are not following the 1982 fertility schedule developed by the Census. In order to assess the likely evolution of their fertility schedules, we compared them to the low, medium, and high fertility hypotheses developed by Spencer for the years 1985, 1990, and 1995[13]. This comparison reveals that the number of children already born to 25-29 year old women in 1980 resembles most closely the middle hypothesis projected for 1990; that of the 20-24 year old women, the middle hypothesis for 1995; while that of the 15-19 year olds approximates that of the low hypothesis projected for 1995. It appears that Hispanic women are following the low hypothesis of future fertility: the younger the women, the more their fertility profile resembles the low profile projected for some remote point in time.

Making use nonetheless of the low fertility scenario projected by Spencer, it appears likely that the 25-29 year olds will finish their reproductive cycles with 2.8 children, the 20-24 year olds with 2.6 children, and the 15-19 year olds with 2.4 children. Presumably the cumulative effects of any further decline in age-specific fertility rates over the course of their reproductive cycle, including those which we have just documented, will lead to still smaller completed family sizes for each of these age groups.

Given the fact that Spanish language fertility rates appear to be lower than those projected by Spencer, the retention of his high series of projected fertility is clearly inappropriate. His medium series, however, will be used as our highest projection of future fertility[14] while his low series will be treated as our medium level of future fertility. Further, since even this fertility schedule does not appear to be sufficiently low to explain the 1980 Census findings, we shall develop a projection which is still lower than that produced by Spencer[15] (Table A2.2).

In addition, we shall assume that women who did not speak English well at the time of the 1980 Census roughly resemble the women we have defined as Spanish monolinguals in our analysis of the SIE[16]. Their birth rates accordingly will be increased by 20 percent, while those of English-speaking women will be decreased by 5 percent. These figures not only respect the 25-percent differential observed between the two groups in 1980; given the relative size of the

two groups, they permit us to maintain a global fertility rate which closely approximates the projected norm for the Spanish language group as a whole. In the absence of conclusive data to the contrary, we have not projected fertility differences between English bilingual and Spanish bilingual women.

Putting Children into Language Practice Groups

One of the principal unknown parameters in our population model concerns the attribution of children to the different language categories during the first four years of their lives. Were all children immediately assigned to the language group of their mother, this problem could be readily solved.

However, SIE data suggest that young children are much more likely to speak English (and adopt English as their principal language) than are their mothers[17]. Three reasons combine to explain this precocious language shift: (1) *The lack of male partners with language characteristics similar to those of Spanish language women.* Data show that immigrant men are much more likely to speak English than are women, and are significantly less likely, for example, to be Spanish monolinguals. *(2) The desire of some parents to teach English to their children at a very early age.* It is likely that some parents continue to speak Spanish to each other as their principal daily language, but generally speak English to their children. *(3) The anglicizing influence of older children in both the nuclear and the extended family*[18]

As a general guide we have minimized the degree to which the language characteristics of 0-4 year old children may differ from those of their mothers. Children of Spanish monolingual women are required to be either Spanish monolinguals themselves or Spanish bilinguals; while those of Spanish bilingual women may be either Spanish bilinguals or English bilinguals. Similarly, children of English bilingual women have English for their mother tongue and may be either English monolinguals or English bilinguals at this early age.

Alternative patterns are indeed found in the data, as when an English bilingual woman raises a child who has been given Spanish as its mother tongue, in a deliberate effort to pass Spanish on to the next generation. On the whole, however, such patterns are relatively rare[19].

The adoption of this general approach to the assignment of children to specific language groups requires the development of specific parameters of language retention and shift. We have dealt with this issue by comparing the language practice of 4 year old children to that of their mothers. Since their mother tongue is not known to us, the language characteristics of the children are directly projected as a function of the language practice of their mothers.

Briefly, all children born to Spanish monolingual or Spanish bilingual women were assigned Spanish as mother tongue[20]. This decision is relatively important because fewer English bilingual children in the hispanophone group will come to abandon Spanish than will those who have English as their mother tongue. Similarly, children born to English bilingual women were assigned English for their first language.

With respect to the language characteristics of children born into each mother tongue group, 72.5 percent of the children born to Spanish monolingual women were still monolingual[21] when they reached 4 years of age. Similarly, 45 percent of children born to Spanish bilingual women retained the language characteristics of their mothers[22]; the remainder had already become English bilingual. On the other hand, 55 percent of the children born to English bilingual women did not speak Spanish on a regular basis in early childhood[23].

Modeling the Language Shift Process

Two approaches to the modeling of language shift have been adopted, both of which follow the path traced in our earlier work on the French language (Veltman, 1987).

a. Language shift among immigrants. We assume that all immigrants enter the United States as Spanish monolinguals, a plausible hypothesis given the definition of Spanish bilingualism adopted in our study. It does not appear likely that hispanophone immigrants would speak English on a regular basis ("often") upon their arrival in the United States. Nonetheless, they learn English rapidly and must be distributed to the Spanish monolingual, Spanish bilingual, English bilingual, and English monolingual groups in accordance with the rates and time frame presented in Chapter 5[24]. Similarly, we require the immigrant population already resident in the United States in 1976 to follow the trajectory of language shift established in that chapter[25].

Immigrant language shift data also were found to

vary by sex. While rates of English monolingualism and English bilingualism appear relatively similar for both men and women, the proportion of women remaining Spanish monolinguals is approximately 30 percent higher than that for men. This differential is retained in our analysis.

Further, three scenarios of language shift were developed: the preferred hypothesis based upon the data presented in Table 5.1, and two alternative hypotheses. In the hypothesis of high language mobility, the incidence of English monolingualism was increased by 20 percent, that of Spanish monolingualism was decreased by 10 percent, and that of English bilingualism was increased by 10 percent[26]; in that of low language mobility, the incidence of English monolingualism was decreased by 20 percent, and so on. The appropriate age-specific language coefficients for each of these three hypotheses are presented in Table A2.3. The distribution of language characteristics of immigrants entering the United States after 1976 obtained by the application of these coefficients is presented in Table 10.4. Similarly, the evolution of language characteristics for immigrants already resident in the United States in 1976 is presented in Table A2.4.

b. Language shift among native-born hispanophones. Language mobility among the native born is assumed to stop at approximately 20 years of age. Since we have divided the Spanish language group into three components, coefficients of transition from one class to another will be applied. That is to say, a certain percentage of 0-4 year olds will remain in the Spanish monolingual class when they become 5 to 9 years of age. Others will be added to the Spanish bilingual class, which will have lost some of its 0 to 4 year olds to the English bilingual group. Similarly, some of the children previously bilingual in English will have passed into the English monolingual group (and out of our model).

Once again, we have fixed target rates of anglicization for the native born based upon the observed language practice of hispanophones living in urban areas. An expected anglicization rate of 75 percent, divided between 57.5 percent English bilingualism and 17.5 percent English monolingualism, is projected for children who were aged 0-4 in 1976.

Two alternative hypotheses also have been developed which increase or decrease the loss rate to English monolingualism among persons who were English bilinguals in the preceding period. The hypothesis of more extensive language shift is associated with a total anglicization rate of 80 percent, of which 20 percent will have become English monolinguals. The hypothesis of more limited language shift projects an English monolingualism rate of 15 percent and a total anglicization rate of 70 percent. The relevant coefficients for each hypothesis are presented in Table 10.5, together with the expected language shift characteristics of hispanophone children[27].

c. Language shift among native-born anglophones. A further problem concerns language shift rates of children born to English bilingual mothers. Based on data reported in Chapter 3, it appears that at least 65 percent of these children will cease to speak Spanish as a second language, most of them almost immediately[28]. This suggests that English bilingual mothers often do not attempt to teach their anglophone children Spanish as a second language. Since it is highly unlikely that all children who are bilingual in early childhood will retain Spanish as they get older, it is necessary to calculate a final rate of English bilingualism which appears intuitively plausible. We have fixed this rate at 25 percent in our middle hypothesis.

A second hypothesis, one we think more realistic, fixes the final level of English bilingualism at 15 percent, a figure slightly higher than that which we earlier found among English bilingual Franco-Americans[29]. Although rates of language shift among hispanophones are lower than those observed among francophones, it should be remembered that we are dealing here with anglophones, that is, persons of English mother tongue. Since they communicate with their parents in English, there is no natural milieu in which such Spanish as they learn is likely to be used, and since they are anglophones, they are likely to adopt the general American attitude that all civilized people speak English. A third hypothesis, one we find less likely, fixes the final rate of English bilingualism at 35 percent, the figure already observed in 1976. The relevant data are presented in Table 10.6.

Future Immigration

The age and sex structure of future immigration was first of all developed from three sets of net immigration projections (total entries minus total return migration) developed by Spencer (1986) for five-year age and sex groups: 85,700 persons, 143,200 persons, and 361,500 persons. Since none of these figures seems to lie within the parameters suggested either by

Table 10.4

**Projected Language Characteristics of Immigrants by Period:
Persons Arriving in the United States after 1976,
Spanish Mother Tongue, 1976-2001**

Low Mobility Hypothesis :

Period	English Monolingual %	English Bilingual %	Spanish Bilingual %	Spanish Monolingual %
1981	0.6	9.3	29.0	61.1
1986	1.2	14.1	37.4	47.3
1991	2.3	20.1	41.6	36.0
1996	4.0	24.5	47.3	24.2
2001*	4.1	24.7	47.4	23.8

Preferred Hypothesis:

Period	English Monolingual %	English Bilingual %	Spanish Bilingual %	Spanish Monolingual %
1981	0.7	10.3	33.2	55.8
1986	1.4	15.8	39.8	43.0
1991	2.8	22.1	42.4	32.7
1996	4.8	26.9	46.3	22.0
2001*	4.9	27.1	46.3	21.7

High Mobility Hypothesis:

Period	English Monolingual %	English Bilingual %	Spanish Bilingual %	Spanish Monolingual %
1981	0.8	11.3	37.1	50.8
1986	1.7	17.3	41.9	39.1
1991	3.3	24.3	42.7	29.7
1996	5.5	29.6	44.8	20.1
2001*	5.7	29.9	44.6	19.8

* Changes are produced by mortality.

Table 10.5

Projected Language Practice of Native-Born Children Aged 0-4, Spanish Mother Tongue, United States, 1976

Low Mobility Hypothesis

Age Group	Year	English Monolingual %	English Bilingual %	Spanish Bilingual %	Spanish Monolingual %
0 - 4	1976	0.00	33.60	49.70	16.70
5 - 9	1981	3.53	40.01	49.78	6.68
10 - 14	1986	7.73	44.52	45.08	2.67
15 - 19	1991	12.40	49.99	35.31	2.30
20 - 24	1996	15.00	55.00	28.00	2.00

Preferred Hypothesis

Age Group	Year	English Monolingual %	English Bilingual %	Spanish Bilingual %	Spanish Monolingual %
0 - 4	1976	0.00	33.60	49.70	16.70
5 - 9	1981	4.20	43.07	48.14	4.59
10 - 14	1986	9.58	49.72	39.43	1.27
15 - 19	1991	14.56	53.62	30.70	1.12
20 - 24	1996	17.50	57.50	24.00	1.00

High Mobility Hypothesis

Age Group	Year	English Monolingual %	English Bilingual %	Spanish Bilingual %	Spanish Monolingual %
0 - 4	1976	0.00	33.60	49.70	16.70
5 - 9	1981	4.87	46.12	45.67	3.34
10 - 14	1986	11.56	54.28	33.50	0.66
15 - 19	1991	16.99	57.22	25.21	0.58
20 - 24	1996	20.00	60.00	19.50	0.50

Table 10.6

Projected Retention of Spanish by Children of English Mother Tongue: United States, 1976-2001

	Low Mobility Hypothesis (%)	Preferred Hypothesis (%)	High Mobility Hypothesis (%)
0 - 4	60.0[i]	55.0[iii]	50.0[v]
5 - 9	52.4[ii]	45.2[iv]	37.0[vi]
10 - 14	45.8	37.1	27.4
15 - 19	40.1	30.5	20.3
20 - 24	35.0	25.0	15.0

[i]60 % of children born to English bilingual women will speak Spanish;
[ii]87.4 % rate of retention of Spanish;
[iii]55 % of children born to English bilingual women will speak Spanish;
[iv]82.1 % rate of retention of Spanish;
[v]50 % of children born to English bilingual women will speak Spanish;
[vi]74 % rate of retention of Spanish.

Table 10.7

Projected Age and Sex Structure of the Immigrant Population: Persons of Spanish Mother Tongue, United States

Total Immigration per Five Year Period: 1,250,000

Age Group	Male	Female	Total	Percent
0 - 4	67,270	63,980	131,250	10.5
5 - 9	67,270	63,980	131,250	10.5
10-14	64,420	60,580	125,000	10.0
15-19	80,950	70,750	151,700	12.1
20-24	146,680	101,620	248,300	19.9
25-29	95,740	62,430	158,170	12.7
30-34	43,180	36,140	79,320	6.3
35-39	36,770	38,420	75,190	6.0
40-44	23,960	25,850	49,810	4.0
45-49	12,810	17,530	30,340	2.4
50-54	9,300	14,270	23,570	1.9
55-59	6,770	11,740	18,510	1.5
60-64	4,500	6,770	11,270	0.9
65-69	1,760	4,030	5,790	0.5
70-74	1,240	2,530	3,770	0.3
75-79	1,500	2,270	3,770	0.3
80+	1,240	1,760	3,000	0.2
Total	**665,370**	**584,630**	**1,250,000**	**100.0**

Source: Spencer, 1986 (adapted; see text)
Numbers may not sum to column totals due to rounding.

the analysis of SIE data or the 1980 Census data, we developed our own estimates for 250,000 net entries per year. Specific age/sex data were developed by linear interpretation from Spencer's data[30]. It should be observed that males outnumber females in all age groups under 35 years of age, most particularly among 20 to 34 year olds.

Closer examination of these data revealed, however, that Hispanic immigrants appear to be somewhat younger than Spencer's work suggests. Consequently, we readjusted our age/sex figures to bring them into line with the data presented in Table 5.1. Our immigrant population is, therefore, younger than that projected by Spencer, a factor which is generally conducive to more rapid population growth.

The analysis of data obtained from the 1980 Census permits us to fix at approximately 1.28 million persons the number of entries from Spanish-speaking countries during the 1975-1979 period (see Table 4.2). While it is difficult to directly compare this data to Immigration and Naturalization Service statistics[31], it would appear that legal immigration during this period amounted to 790,000 persons. If, in addition to these immigrants, we add an estimated 167,000 Puerto Ricans who arrived on the mainland after 1976[32], then we may estimate that legal immigration represents approximately 75 percent of total immigration.

Immigration and Naturalization Service statistics also reveal that this flow of immigrants remained relatively constant in the succeeding period. Thus, 1980-1984 entries dropped by approximately 8 percent to 734,000 legal admissions. If we project similar percentages for Puerto Rican and illegal entries, the final figure for the period closely resembles that observed for the previous period (1.2 million persons).

As a result, we have fixed immigration levels at 250,000 per year for the period 1976-1986 (Table 10.7), after which time three alternative hypotheses are applied: continued immigration at this level, a 10-percent increase per period in net immigration (to 333,000 immigrants during the 1996-2001 time frame), or a 10-percent decrease per period in net arrivals (to 188,000 during the last projection period). Increased immigration may be associated with a rise in the standard of living in the United States relative to Latin American countries; decreased immigration with a relative decline in such differentials. Alternatively, decreased levels of immigration also can be produced by a policy which would more effectively control illegal immigration.

Methodology

The approach developed in our model is relatively straightforward. First of all, immigrants are added to the base model. They are immediately subjected to 2.5 years of mortality and language shift, this figure representing the average length of residence in the United States. All other groups present in the model were simultaneously subjected to five years of mortality and language shift. Children were then born to women present in the model and assigned to their appropriate language groups. This procedure completed the evolution of the population between 1981 and 1986. A similar procedure developed projections for each time period studied in this report, using fertility and mortality data appropriate to each time period.

Conclusion

The data and analysis presented in this chapter permit us to establish the future size and composition of the Spanish language group. For each set of variables—language practice, fertility, and immigration—alternative scenarios have been developed incorporating high, middle, and low hypotheses. In the case of the language shift variables, all parameters will be modified simultaneously to reflect the hypothesis under examination.

In the next chapter we shall pursue two objectives: first, to estimate the size and composition of the Spanish language group in the future; second, to examine the differential impact of migration, language shift, and fertility scenarios on this process.

Notes:

1. Spencer, G. Projections of the Hispanic Population: 1983-2080, Current Population Reports, Population Estimates and Projections, Series P-25, no. 995. Washington: U.S. Department of Commerce, Bureau of the Census, 1986.
2. Since population projections were made using Symphony (Lotus 1-2-3), we did not believe (at the developmental stage) that we had sufficient memory available to retain English monolinguals for analysis. This judgment was premature, since eventually we were obliged to upgrade our hardware system to accomodate 1.9 megabytes of RAM in order to complete our analysis. But the use of Symphony macros to project different fertility and immigration assumptions inhibits the addition of new columns or rows of data.
3. Essentially, the data were smoothed by calculating a double set of moving averages, the first based on five successive age groups, the second on three age groups using as input data the averages obtained during the first step. The data were first smoothed for male-female ratios in each age group, then adjusted so that each language class retained its original size. The evolution of language characteristics subsequently was smoothed using the same technique. A final correction returned each age group to its initial size.
4. Spencer, op. cit., Table B-1, page 76. Given the small changes in mortality projected for the 1982-2000 period, we have used 1985 estimates for all periods.
5. Projections were based on Hispanic ancestry birth data compiled by the National Center for Health Statistics for the years 1979-1981. Births were compared to the size of the Hispanic ancestry population as reported in the 1980 Census (see Spencer, op. cit., 1986, page 25, for a detailed discussion).
6. For example, 1.5 million persons of the 4.6 million native-born adults declaring Hispanic ancestry in 1976 were monolingual anglophones (Veltman, 1983, page 43).
7. Including native-born persons born in Puerto Rico.
8. This class also includes persons who reportedly speak English "very well."
9. Includes women who do not speak English at all.
10. This curious finding is not explained by the more rural origins of the native-born women. Older native-born women living in SMSAs in 1980 also had larger completed family sizes than did immigrant women in the same age group.
11. The total fertility rate.
12. For example, we added together the number of children ever born to 15, 16, 17, 18 and 19 year old women according to Spencer's schedule (Table A-1, page 72). The mean was obtained by dividing this number by 5.
13. Each estimate is designed to converge upon final White fertility rates of 1.6, 1.9, and 2.3 children in the year 2050. In the view of the Bureau of the Census, ethno-racial differences in reproductive behavior will cease to exist at that time.
14. This scenario postulates completed family size of 2.7 to 2.8 children during the 1982-2000 period. Given the analysis which we have just presented, stable or increasing rates of fertility would seem most unlikely.
15. A linear reduction of age-specific birth rates by 10 percent.
16. We have since documented the validity of this assumption.
17. Strictly speaking, our analysis is based on the comparison of the language characteristics of 4 year old children with those of their mothers. Although this data base is limited in size, the portrait obtained is sustained by similar comparisons for 5-9 and 10-14 year old children. The language characteristics of these latter children have been used to calibrate transition rates of language shift from one age group to another.
18. In our study of the Greek community in Montreal, we observed four year old Greek children who generally spoke English but whose parents could barely speak that language (Veltman and Ioannou, 1984). Most frequently, older siblings or cousins with whom they played were said to have taught them English.
19. In fact, we have not ignored them. Our treatment consists essentially in lowering the rate of production of English bilingual children by Spanish bilingual women.
20. As a matter of fact, the data suggest that some Spanish bilingual mothers will raise children of English mother tongue because English is the dominant household language. This pattern is much more frequently found than is the contrary pattern, English bilingual women living in predominantly Spanish language households. Consequently, a method which assigns mother tongue as a function of the mother's language characteristics will err on the side of linguistic conservatism, placing children in the Spanish mother tongue group more often than warranted. Such error, however, is small in magnitude and inconsequential for the modeling process.
21. Eighty percent according to the hypothesis of low language shift; 65 percent in the hypothesis of high language shift.
22. Versus 40 percent and 50 percent respectively in the high and low hypotheses of language mobility.
23. Versus 60 percent and 50 percent respectively in the low and high hypotheses of language mobility. It will also be seen from Table 11.6 that the rates of retention of Spanish also vary according to each hypothesis. Not only, for example, do fewer children learn Spanish according to the hypothesis of high language mobility; they also lose it more rapidly.

24. Target goals for the distribution of the four different types of language practice were established by linear interpolation. For example, the SIE provides estimates of language shift for persons residing in the United States for an average of 0.75 years (having arrived between January 1975 and June 1976), 4 years (1970-1974), 9 years (1965-1969), etc. Target goals were fixed for each type of language practice after mean length of residence of 2.5 years (1976-1981), 7.5 years (in 1986), 12.5 years (in 1991), etc. After having smoothed the original language practice data using the techniques described earlier in this chapter, coefficients of language practice were adjusted to produce the desired target goal for each time period. The coefficients retained are presented in Table A2.3.
25. Once again, target goals were known from Table 5.1. Once language shift data by age were smoothed for time of arrival groups, coefficients were adjusted to produce the target goals.
26. An increase of 10 percent in the rate of English monolingualism introduced so little change in the results that a higher figure was adopted instead. Spanish bilingualism was treated as a residual category.
27. Table A2.5 presents similar data for the first set of children born in the course of our model, i.e., in 1981, because this group contains more Spanish monolinguals than any other.
28. We have previously observed that approximately 100,000 children in each of the 4-9 and 10-14 year old age groups are likely to be English bilinguals of Spanish mother tongue. Were such children excluded from Table 3.5, the rate of English monolingualism would already attain 67-68 percent.
29. This figure is based on a detailed comparison of the 1975 CPS and the 1976 SIE. It is one in which we have a good deal of confidence.
30. Only the lower and higher immigration series were used to create our estimate since the middle series includes no provision for return migration. Since both the lower and higher series provide for 30,000 return migrants, our projected level of 250,000 entries includes 280,000 total immigrants and 30,000 emigrants.
31. Immigration and Naturalization Service statistics were graciously furnished by Robert Warren, Statistical Analysis Branch, United States Immigration and Naturalization Service.
32. The large increase in "Puerto Ricans" from 1976-1980 is probably also a function of illegal immigration. Being "Puerto Rican" is one way to claim American citizenship while at the same time remaining a genuine hispanophone.

Quick Reference Glossary*

Mother Tongue is the first language learned.
Anglicization is the adoption of English as one's principal language by a person of a minority mother tongue.
Anglophones are persons of English mother tongue, ***hispanophones*** are persons of Spanish mother tongue, and ***allophones*** are persons of mother tongues other than English or Spanish. ***Our use of these terms will always apply to mother tongue groups and never to usual language groups.***
Spanish language group refers only to those persons who practice Spanish as a daily language, and is composed of English bilinguals, Spanish bilinguals, and Spanish monolinguals. ***Spanish origin group*** refers to all persons included in our data sources irrespective of their mother tongues or current language practices.

*For more complete definitions see Chapter 1, page 7.

Chapter 11

Projections: The Size and Composition Of the Spanish Language Group, 1976-2001

This chapter begins with a summary of the population parameters which we shall use in projecting the size and composition of the Spanish language group for the period beginning in 1976 and ending in the year 2001. We shall first of all define our preferred model of population growth, that is, the one which assigns the most likely values to the most important population parameters. Our preferred hypothesis projects a stable level of immigration at 250,000 persons per year, medium rates of fertility (Spencer's lower hypothesis), and the middle series of language shift coefficients. A summary of these coefficients, together with their alternative values in the hypotheses of higher and lower rates of language shift, is presented in Table 11.1. It should be noted that the values projected for the middle hypothesis are those which are directly derived from our analysis of the SIE data.

Once we have developed population characteristics from this preferred hypothesis, we shall then test the effects of altering a single variable at a time, increasing or decreasing rates of language shift, fertility, and immigration in comparison to this central, preferred model. This procedure will enable us to assess the relative importance of each variable for the process of Spanish language population growth. Later, we shall examine the effects of combining different sets of variables to produce low growth and high growth models.

The Size of the Spanish Language Group

The preferred model projects the Spanish language population at 16.59 million persons for the year 2001, nearly double that observed in 1976. As can be seen from Table 11.2, all models of population growth in which a single variable differs from the preferred hypothesis project important growth in the size of the Spanish language group, ranging from 15.8 million to 17.5 million persons in 2001.

To examine the net effect of differential fertility on projected population growth, immigration and language shift parameters were fixed at their preferred levels while births were projected at low or high fertility levels. The use of our lowest fertility hypothesis would produce a final population of 16.37 million persons in the year 2001, while that of the highest fertility hypothesis would yield an estimated 17.00 million people. Since these differences are relatively modest, we may conclude that fertility differentials do

Table 11.1

Language Shift Parameters Used in the Projected Model

Characteristic	Preferred Hypothesis (%)	High Shift (%)	Low Shift (%)
Births			
Transmission of Spanish monolingualism	72.5	65.0	80.0
Transmission of Spanish bilingualism	45.0	40.0	50.0
Transmission of English bilingualism	55.0	50.0	60.0
Language Shift, native born			
English mother tongue, bilingual	25.0	15.0	35.0
Spanish mother tongue			
English monolingualism	17.5	20.0	15.0
English bilingualism	57.5	60.0	55.0
Total anglicisation	75.0	80.0	70.0
Language Shift, foreign born			
Incidence of Spanish monolingualism	-	-10.0	+10.0
Incidence of English bilingualism	-	+10.0	-10.0
Incidence of English monolingualism	-	+20.0	-20.0

Table 11.2

Projected Size of the Spanish Language Group, United States, 1976-2001

Hypothesis	Population (millions)					
	1976	1981	1986	1991	1996	2001
Preferred	8.57	10.17	11.86	13.53	15.04	16.59
Language Variants						
High Shift	8.57	10.03	11.58	13.09	14.43	15.81
Low Shift	8.57	10.28	12.10	13.91	15.59	17.32
Fertility Variants						
High	8.57	10.17	11.89	13.66	15.30	17.00
Low	8.57	10.13	11.78	13.40	14.87	16.37
Immigrant Variants						
Increasing	8.57	10.17	11.86	13.67	15.47	17.50
Decreasing	8.57	10.17	11.86	13.40	14.64	15.80
Extreme Scenarios						
Low Growth	8.57	9.99	11.50	12.84	13.88	14.83
High Growth	8.57	10.28	12.13	14.18	16.31	18.71

not play an extremely important role in the long-term growth of the Spanish language group.

The application of our alternative scenarios of language mobility has a stronger effect on future population estimates than do differences in fertility levels. A scenario using low levels of language mobility lead to a projected total size of 17.32 million persons in the year 2001, while higher rates of language shift would reduce the size of the group to an estimated 15.81 million persons. Differences in projected rates of language shift, while modest, therefore have a stronger effect on the final size of the Spanish language group than do fertility differentials.

As mentioned in Chapter 10, two alternative scenarios of future immigration were examined for their effects, one in which immigration increases at a rate of 10 percent from one time period to another after 1986, and another in which it decreases by 10 percent. In the former scenario it reaches 333,000 immigrants in the period 1996-2001; in the latter, it descends to 182,000 persons. Under the condition of increasing international immigration, the population would reach 17.50 million persons in 2001, whereas decreasing immigration would lead to an estimated population of only 15.80 million persons. It therefore appears that projected differences in immigration levels have about the same impact on Spanish language population growth as do the differences in the parameters of language shift which we have developed.

Two further scenarios may be conceived as defining the outlying limits of probable population growth. The low growth scenario postulates high language shift, declining immigration after 1986, and low fertility rates; the high growth model postulates low language shift, increasing immigration, and high rates of fertility. The former scenario generates a final population size estimated at 14.83 million, the latter, 18.71 million persons.

The Projected Linguistic Structure Of the Spanish Language Group

Since it would be tedious to present data for each of the scenarios presented in Table 11.2, we shall limit our discussion in the remainder of this chapter to five principal scenarios: the preferred hypothesis, its two language shift variants[1], and the two scenarios of low and high population growth. Results obtained from the remaining scenarios all fall within the limits defined by these five models of population growth.

The examination of the linguistic structure of the Spanish language group (Table 11.3) reveals little change over the period being studied. Generally speaking, the percentage of English bilinguals initially declines but then grows slowly until the year 2001; the percentage of Spanish monolinguals follows the opposite trajectory. Nonetheless, it appears that the Spanish language group will be characterized by a relatively constant linguistic structure from now until the 21st century. Approximately three in eight persons will be Spanish bilinguals, less than one in five Spanish monolinguals, while the remainder, nearly a majority, will have adopted English as their principal language of use.

The alternative models of language shift presented in Table 11.3 show that higher or lower rates of language shift do not radically alter this portrait. Higher rates of language shift lead to lower levels of Spanish monolingualism and a stronger English bilingual component. Lower rates have the opposite effect. In both cases, however, differences from the normative scenario are marginal[2].

The linguistic structure of the population is not fundamentally changed even when the assumptions of high or low population growth are tested. A scenario of high growth leads to a population which is somewhat more retentive of the Spanish language; that of low growth to one which is somewhat more anglicized. These differences, while larger than those observed in the alternative language shift scenarios, are nonetheless relatively small.

The Projected Nativity Structure Of the Spanish Language Group

Table 11.4 reveals a constant decrease in the relative size of the native-born population belonging to the Spanish language group. According to our preferred hypothesis, immigrants will come to outnumber the native born during the 1991-1996 period. In the scenario of higher rates of language shift[3], this transformation already will have been completed during the 1986-1991 period. That this transition occurs somewhat earlier is caused by the more rapid departure of younger, native-born, English-speaking people[4] from the language group. Since this group is more likely to remain in the Spanish language group in the scenario of lower language shift, native-born persons will continue to outnumber immigrants up to the year 2001.

Table 11.3

Projected Linguistic Structure of the Spanish Language Group, United States, 1976-2001

Hypothesis	Language Practice (percent)					
	1976	1981	1986	1991	1996	2001
Preferred						
English bilingual	43.5	42.9	42.7	43.0	43.8	44.5
Spanish bilingual	37.6	36.8	36.8	36.7	36.8	36.8
Spanish monolingual	18.9	20.3	20.5	20.3	19.4	18.7
High Shift						
English bilingual	43.5	43.5	43.5	43.8	44.7	45.3
Spanish bilingual	37.6	37.4	37.3	37.1	37.1	37.0
Spanish monolingual	18.9	19.1	19.2	19.1	18.2	17.7
Low Shift						
English bilingual	43.5	42.2	41.8	42.0	42.8	43.4
Spanish bilingual	37.6	36.1	36.1	36.1	36.2	36.4
Spanish monolingual	18.9	21.7	22.1	21.9	21.0	20.2
High Growth						
English bilingual	43.5	42.2	41.8	41.8	42.2	42.4
Spanish bilingual	37.6	36.1	36.1	35.9	36.0	36.1
Spanish monolingual	18.9	21.7	22.1	22.3	21.8	21.5
Low Growth						
English bilingual	43.5	43.5	43.3	43.9	45.3	46.4
Spanish bilingual	37.6	37.4	37.4	37.2	37.1	37.0
Spanish monolingual	18.9	19.1	19.3	18.9	17.6	16.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 11.4

Projected Percentage of the Spanish Language Group Born in the United States, 1976-2001

Hypothesis	Percent Native Born					
	1976	1981	1986	1991	1996	2001
Preferred	58.6	55.0	52.5	50.8	49.7	48.7
High Shift	58.6	54.4	51.4	49.3	47.8	46.4
Low Shift	58.6	55.4	53.3	52.0	51.3	50.6
High Growth	58.6	55.4	53.4	52.0	51.1	50.1
Low Growth	58.6	54.2	51.1	49.3	48.3	47.4

The Projected Age Structure Of the Spanish Language Group

Although the Spanish language group was characterized in 1976 by the presence of a large number of children, adolescents, and young adults, this will no longer hold true in the future. In fact, Table 11.5 shows that the language group will undergo a rapid change in demographic composition. The percentage of persons aged 0-19 falls from 41.3 percent in 1976 to only 29.4 percent in the year 2001. On the other hand, the number of persons aged sixty and over increases from 7.7 percent in 1976 to 12.0 percent in 2001.

Further, neither of the two alternative language shift hypotheses under study would have a marked impact on this process. More rapid language shift, a hypothesis which would accelerate the movement of young, native-born persons into English monolingualism, would further reduce the numbers of 0-19 year olds while increasing the presence of those over 60 years of age. The hypothesis of lower language shift obviously would have the opposite effect. Nonetheless, the differences observed remain relatively small.

The age structure of the Spanish language group will undergo somewhat more serious modification under conditions of high or low growth. The high growth model leads to a population which is relatively young; the low growth model to one which contains higher percentages of older persons. For example, in the high growth model the young would represent 33.4 percent of the population in the year 2001, the oldest age group, 10.8 percent. In the hypothesis of low growth, the percentage of the young would fall to only 26.0 while that of the elderly would rise to 13.3. Nonetheless, these two models of population growth lead to the same general conclusion as do the more normative hypotheses already examined: the Spanish-language group increasingly will be composed of older people as we approach the 21st century[5].

Discussion and Conclusion

Several important conclusions can be drawn from the data presented in this chapter. First, all reasonable sets of parameters tend to produce similar results. While the gap in projected population size between the outer-limit scenarios of high or low growth is relatively large (3.9 million persons), any other combination of variables produces estimates ranging from 15.8 to 17.5 million persons.

Secondly, the essential characteristics of the Spanish language group do not show important variation between the principal scenarios examined, the proportion that is native born fluctuating between 46.4 and 50.6 percent, the proportion that is Spanish monolingual between 17.7 and 20.2 percent, the percentage of the young fluctuating between 27.6 and 31.0 percent, and, of the old, between 11.1 and 12.6 percent. The differences are, of course, greater when all the principal factors in the population model are combined in the high growth or low growth model.

Although the population growth of the Spanish language group appears impressive, the data presented in this chapter mask a very important phenomenon. Up to this point, we have simply excluded persons from the modeling process as they became monolingual in English. In order to assess the total impact of the abandonment of Spanish over the 25-year period, we have developed an additional scenario in which English bilinguals do not leave the Spanish language group: women of English mother tongue will always give birth to English bilingual children, and English bilingual children, whether anglophone or hispanophone, will always retain Spanish as a frequently used second language[6]. Under these conditions, the final size of the population would attain 21.02 million in 2001, or 4.43 million persons higher than that predicted by our preferred hypothesis.

The importance of this estimate should not be overlooked. Although the Spanish language group will grow by 8.02 million persons according to our preferred scenario, this growth stems from the direct and indirect effects of international immigration. During this period 6.25 million immigrants will have been directly added to the Spanish language group; immigrant women arriving between 1976 and 2001 will have given birth to approximately 2.35 million children. Thus, in the year 2001, some 8.60 million immigrants and their children will have been added to the Spanish language group. Of this number approximately 220,000 will already have died, and another 590,000 will already have been anglicized[7], leaving the net contribution of international immigration to the Spanish language group at 7.79 million persons.

The impressive growth forecast for the Spanish language group is, therefore, partly illusory. Compared to what that growth could be, it is relatively limited, the continuing impact of international immigration accounting for nearly all of it.

Let us suppose for a moment that no new immi-

Table 11.5

Age Structure of the Spanish Language Group, United States, 1976-2001

Hypothesis	Age Structure (percent)					
	1976	1981	1986	1991	1996	2001
Preferred						
0 - 19	41.3	38.0	35.5	33.5	31.5	29.4
20 - 39	32.3	34.2	35.0	34.7	34.7	33.4
40 - 59	18.7	19.6	20.4	21.6	23.2	25.2
60 +	7.7	8.2	9.1	10.2	10.6	12.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
High Shift						
0 - 19	41.3	37.2	34.4	32.0	29.8	27.6
20 - 39	32.3	34.5	35.4	35.2	35.0	33.4
40 - 59	18.7	19.8	20.9	22.3	24.1	26.3
60 +	7.7	8.5	9.3	10.5	11.1	12.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Low Shift						
0 - 19	41.3	38.4	36.5	34.8	33.0	31.0
20 - 39	32.3	34.0	34.6	34.3	34.3	33.3
40 - 59	18.7	19.4	20.0	21.0	22.4	25.2
60 +	7.7	8.2	8.9	9.9	10.3	11.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Low Growth						
0 - 19	41.3	38.4	36.7	35.5	34.5	33.4
20 - 39	32.3	34.0	34.5	34.1	34.0	32.9
40 - 59	18.7	19.4	19.9	20.7	21.6	22.9
60 +	7.7	8.2	8.9	9.7	9.9	10.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
High Growth						
0 - 19	41.3	37.0	33.9	31.2	28.6	26.0
20 - 39	32.3	34.7	35.7	35.5	35.1	33.2
40 - 59	18.7	19.9	21.0	22.6	24.8	27.5
60 +	7.7	8.4	9.4	10.7	11.5	13.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 11.6

Projected Characteristics of the Spanish Language Group, 1976-2001, Persons Residing in the United States, 1976*

Preferred Hypothesis

	1976	1981	1986	1991	1996	2001
Projected Size (millions)	8.57	8.85	9.05	9.08	8.95	8.80
Linguistic Composition (percent)						
English bilingual	43.5	48.0	52.0	55.0	57.8	59.8
Spanish bilingual	37.6	37.2	36.3	34.8	33.3	32.0
Spanish monolingual	18.9	14.8	11.7	10.2	8.9	8.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percent Native Born	58.6	62.2	64.7	66.8	68.8	70.1
Age Structure (percent)						
0 - 19	41.3	36.8	32.8	28.6	24.4	20.7
20 - 39	32.3	33.0	32.7	31.4	30.9	28.8
40 - 59	18.7	21.1	23.4	26.2	29.0	31.3
60 +	7.7	9.1	11.1	13.8	15.7	19.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

*No new immigrants admitted.

Table 11.7

Projected Characteristics of the Spanish Language Group, 1976-2001, Persons Residing in the United States, 1986*

Preferred Hypothesis

	1976	1981	1986	1991	1996	2001
Projected Size (millions)	8.57	10.18	11.89	12.23	12.23	12.22
Linguistic Composition (percent)						
English bilingual	43.5	43.2	43.1	47.0	51.1	54.2
Spanish bilingual	37.6	36.6	36.5	36.8	36.4	35.3
Spanish monolingual	18.9	20.2	20.4	16.2	12.5	10.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percent Native Born	58.6	55.0	52.6	55.7	58.3	60.1
Age Structure (percent)						
0 - 19	41.3	38.2	35.8	32.3	28.7	24.6
20 - 39	32.3	34.1	34.8	33.8	32.9	30.4
40 - 59	18.7	19.5	20.3	22.8	25.9	29.7
60 +	7.7	8.2	9.1	11.1	12.5	15.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

*No new immigrants admitted.

grants, legal or illegal, entered the United States after the year 1976. The relevant data, presented in Table 11.6, show that the Spanish language group would have increased in size from 8.57 million in 1976 to 9.08 million in 1991, after which time it would have declined to 8.95 million in 1996 and to 8.80 million in 2001. Thus, the modest growth projected for this group from 1976 to 2001 (230,000 persons) would already be headed downward as mortality and linguistic assimilation took their toll.

Further, the linguistic and demographic characteristics of the pre-1976 population in the year 2001 presage a still more important decline in the 21st century. The percentage of English bilinguals rises from 43.5 to 59.8 over the 1976-2000 time period, as that of Spanish monolinguals declines to only 8.2 percent. While nearly three-fourths of the 1976 population was under 40 years of age, more than half of the 2001 population will be older than 40.

A similar comparison demonstrates the effect of curtailing immigration in 1986, after having admitted 250,000 immigrants per year during the 1976-1985 period. Given the rates of language shift postulated in the preferred model, the population would rise from 8.57 million in 1976 to 12.20 million in 1991 (Table 11.7). By 1996 the combined effects of mortality and language shift would nearly erase the contribution of fertility, the population attaining 12.23 million persons. After that time the population would begin to decline, albeit marginally (12.22 million in 2001) as the effects of language shift begin to be more clearly felt.

Needless to say, the decline would accelerate in the 21st century as a result of the transformation of the demographic structure of the group. The proportion of English bilinguals would rise from 43.5 to 54.2 percent from 1976 to 2001, while at the same time the aging of the population would proceed rapidly. The sharp decline in the number of women in the child-bearing years inevitably would provoke a still more rapid decrease in the size of the Spanish language group in the 21st century.

In fact, Tables 11.6 and 11.7 illustrate nicely the rapid growth of English bilingualism in the absence of continuing high levels of immigration. As we already have shown, this leads to the birth of children who will

Table 11.8

Projected Size of the Spanish Language Group, Native Born Population, 1976

Period	Estimated Population (millions)	Change (Percent)
1976	5.02	---
1981	5.15	+2.6
1986	5.30	+2.9
1991	5.43	+2.3
1996	5.45	+0.4
2001	5.42	-0.5
2006	5.35	-1.2
2011	5.20	-2.8
2016	5.00	-3.8
2021	4.65	-7.1
2026	4.40	-5.3
2031	4.11	-6.6
2036	3.74	-9.0
2041	3.34	-9.0
2046	2.70	-9.4
2051	2.37	-12.0

have English for their mother tongue, a situation which is not conducive to the learning or retention of Spanish as a second language. *It is precisely this link between parental anglicization and the language practice of their children that causes the acceleration of the decline of a minority language group in the absence of continuing high levels of immigration.* Because they are relatively young, immigrants retard the aging of the minority language population; at the same time they increase the number of native-born children. In addition, they replenish the linguistic core of the group, masking recognition of the anglicization which causes the eventual decline of the group.

This point can be illustrated from Table 11.8, where we project the future growth of an entirely native-born population, that which was present in 1976. The population would increase from 5.02 million to 5.46 million in the year 1996, after which time a progressively more important decline sets in. From an estimated 5.45 million persons in the year 2001, 71 percent of whom will be English bilinguals, the population would drop to an estimated 4.4 million persons 25 years later (2026). Were we to continue the application of our language shift parameters to the year 2051, only 2.4 million persons would be left. An estimated 58.2 percent would be 60 years of age or older and 85.9 percent would have made English their usual, preferred language. *This analysis, however hypothetical, shows that decline, once begun, constantly accelerates over time.*

Observed and projected levels of immigration are sufficiently high, however, not only to mask current losses to English monolingualism, but to produce important population growth. The process of anglicization is, notwithstanding, so rapid that no important changes are forecast for the linguistic composition of the group.

Viewed somewhat differently, the absolute size of each linguistic component of the Spanish language group may be expected to share equally in the general growth projected by the preferred scenario. This finding is significant when, for example, Spanish monolingualism is perceived to be undesirable for political, economic, or social reasons. *Our projections make it clear that Spanish monolingualism will not disappear in the future.* In fact, according to the preferred hypothesis, the number of Spanish monolinguals will rise from 1.6 to 3.1 million persons (3.5 million in the scenario of low rates of language shift) during this time period. The distribution of Spanish monolingualism among age, sex, and nativity groups may be expected to remain relatively stable from 1976 to 2001, affecting mainly immigrants, particularly women, who arrive in the United States after they have attained 15 years of age. Spanish monolingualism among the native born is confined to the very young and disappears very rapidly.

In sum, the scenarios developed in this chapter assume that the future will likely reproduce the past, taking into account the trends which appeared in the course of our data analysis. For example, we have observed that rates of language shift, notably anglicization, have been rising over time. This persistent increase is at least in part associated with the continuing urbanization of the Spanish language group. Given the overwhelming preference of new immigrants for large urban areas, it may be expected that this trend will continue.

On the other hand, we also have indicated a number of points in the modeling process which may be considered particularly sensitive, where small changes in parameters may produce relatively strong variations in projected population size. Consequently, were such a parameter modified by private or government intervention, e.g., regarding the transmission of Spanish as a second language to children of English mother tongue, the Spanish language population projections contained in this study would require updating[8].

With respect to future work on the demography of the Spanish language group, regionalized population projections appear to be highly desirable. It appears, for example, that the Spanish language group in Texas may undergo some decline during the remainder of this century, particularly in the rural regions of the state. Nonetheless, birth rates are sufficiently high and language shift rates sufficiently low so that this group is much less dependent on international immigration than are Spanish language groups in the rest of the country.

It also should be observed that approximately one-fourth of the projected population growth will be concentrated in the New York metropolitan area. In fact, a regionalized projection might indicate even stronger growth as a result of two factors: net gain from interregional population movements, and a more favorable (i.e., younger) age structure than exists in many other regions. Thus we may expect the Spanish language group to number 3.0 to 3.5 million persons in the

greater New York area at the turn of the century.

If Los Angeles were to continue to attract one-fourth of all new immigrants, its Spanish language group would number approximately 3 million persons in the year 2001. Should its share of new immigration continue to grow, it may well outstrip New York as the principal home of the Spanish language in the United States, particularly if it should also benefit from inter-regional population movements. Given the high rates of language shift observed for this region, it may be expected that this population will be more anglicized than that of the New York metropolitan area.

The addition of a series of urban and/or regional variables[9] to the population model developed in this chapter would, therefore, greatly enhance our understanding of the regional distribution of the Spanish language group. At the same time, such projections would make possible a more detailed analysis of the future structure of the population by age, sex, place of birth, and language practice for each of the principal urban and regional areas identified in our research.

Notes:

1. Since the introduction of alternative language shift hypotheses leads to approximately the same results as increasing or decreasing rates of immigration, a discussion of both sets of findings seems unnecessary. Similarly, since the results produced by the use of alternative fertility scenarios fall within the projected limits defined by the language shift variables, further discussion of the specific results produced by the former hypotheses also seems superfluous.
2. This observation holds true for all the major alternative models examined.
3. Since the extreme scenarios of high and low growth produce findings which fall inside the limits defined by alternative scenarios of language shift, we shall confine our discussion to this latter topic.
4. Notably bilingual anglophones.
5. On this point our findings confirm those published by the Bureau of the Census (Spencer, 1986).
6. In short, we shall project the size of the Hispanic ancestry group on the basis of the population already present in 1976, to which we will add 250,000 immigrants per year.
7. Most of these losses were incurred when English bilingual women gave birth to children of English mother tongue (440,000 cases). Only 150,000 immigrants themselves became English monolinguals, notably those who arrived at a very young age.
8. Intuitively, we do not think that policy initiatives to retard anglicization can be effective, given what appears to be the strong desire of Hispanic immigrants and their children to adopt English as their preferred language. It appears that they want to become "good Americans," a definition which apparently implies the eventual abandonment of minority languages.
9. Such a task would entail the development of the base population for each area as defined by age, sex, language characteristics, and place of birth. Rates of linguistic mobility for both immigrants and natives should be developed for each region, as well as inter-regional migration flows. Ideally, regionalized projections should be estimated for New York, Los Angeles, Miami, Chicago, San Francisco, San Diego, San Antonio, El Paso, Houston, rural Texas, other urban areas, and other rural areas.

APPENDICES

Appendix 1

Interpreting the 1980 Census Data

The data produced by the 1980 Census seem particularly unreliable given that the three national studies conducted between 1975-1979 permit us to fix the population which actually speaks Spanish on a regular basis at some 9 to 10 million persons in 1980.

As we observed in Chapter 2, the figure proposed by the U.S. Census Bureau—11.6 million persons—does not take into account the large number of 0-4 year olds who may also be Spanish speaking. Given the loose criterion used by the Census to define a Spanish-speaking person, one may presume that another 1 million children could be included in the Spanish language group, bringing the total estimated size to 12.5 million persons.

In this appendix we will attempt to reconcile the 1980 Census data to those presented in this study. To better understand the composition of the Spanish language group, we shall first examine the nativity structure of the group as presented in 1976 and in 1980. Subsequently, we will examine the ethnic composition of the native-born population.

The Importance of Place of Birth

We have shown in Chapter 4 the important role which place of birth plays in the language origins and language profile of the Spanish language group. According to the SIE data, nearly all foreign born persons included in the Spanish language group had Spanish for their mother tongue. Further, the abandonment of Spanish as a daily language was relatively rare, generally being limited to those who were very young when they arrived in the United States. Were a looser definition of the practice of Spanish retained, e.g., "occasionally" rather than "often," the observed rate of English monolingualism among immigrants would probably disappear. Under the broader definition of language practice used by the 1980 Census, nearly all Spanish-speaking immigrants would remain members of the Spanish language group throughout their lives.

This observation leads to our first important decision with regard to the validity of the language data presented by the 1980 Census. All those who declared that they spoke Spanish in response to the 1980 Census question and who were not born in the 50 United States

should probably be considered bona fide members of the Spanish language group. This includes those born in Puerto Rico. Some 4.8 million persons were so identified in the 1980 Census, a figure which is relatively consistent with the immigration trends analyzed earlier in this report.

The Problem of the Native Born

If the claim of the foreign born to be Spanish-speaking is retained, then the exaggerated size of the Spanish language group can be traced to the native-born population. If we accept the SIE as a better source of language data than the 1980 Census, there are simply too many native-born persons who claimed in 1980 that they spoke Spanish at home.

To attempt to understand who might actually belong to the Spanish language population, we have examined the ethnic origins of the members of this group as defined in 1976 and in 1980. The relevant data are presented in Table A1.1.

This table reveals that the percentage of non-Hispanics who reported they spoke Spanish at home rose from 7.2 to 27.8 percent between 1976 and 1980, a finding which we regard as most improbable. It appears that a large number of Americans who do not really belong to the Spanish language group claimed during the Census study that they spoke that language at home. Given the normative character of the anglicization process for persons of Spanish mother tongue, it is not likely that a large group of non-Hispanic Americans would come to speak Spanish at home.

The fact that such a large number of anglophones seem unjustifiably present in the 1980 Census leaves us with two possible courses of action. The first would impose a weighting process to reduce the impact of the non-Hispanic component of the 1980 Spanish language group.

Given, however, the fact that the 1980 Census contains so little information of value for our purposes, we have opted for a simpler solution. We have imposed a second test on the native-born population: not only must they have declared that they spoke Spanish in 1980; they also must have declared some Hispanic ancestry, either in whole or in part. Some 4.95 million native-born persons respond to this double test. Were we to increase the size of this group so that the same proportion of non-Hispanics were present in 1980 as in 1976 (i.e., 7.2 percent), the total size of the native-born Spanish language population reaches 5.33 million.

The addition of 5.3 million native-born persons to the estimated 4.8 million foreign-born members of the Spanish language group produces a combined estimated total of 10.1 million persons who probably belonged to the Spanish language group in 1980. When children aged 0-3 years of age are added to this group, it appears that the Spanish language group numbers approximately 10.8 million persons.

Our preferred scenario based on the SIE predicted 9.85 million. However, this scenario excludes immigrants of Spanish mother tongue who in 1976 no longer spoke that language on a regular basis. Following the logic developed in our analysis of Census data, these 128,000 persons should be added back into the Spanish language group (Table 4.5). This operation would permit us to estimate the 1980 SIE population at approximately 10 million people.

Further, if the 400,000 native-born hispanophones whom we classified as English monolinguals in 1976 reportedly spoke Spanish at home in 1980, we could project a corrected SIE population of approximately 10.4 million people, a figure which is indeed much closer to that obtained from our re-analysis of Census data.

Finally, it would appear that English monolinguals of English mother tongue would also be more likely to report Spanish language practice in 1980, given the broader definition used in the Census study. Given the large numbers of English monolinguals who were raised in Spanish language homes, it is not at all unlikely that an additional 400,000 persons would have declared Spanish language use in the 1980 Census. It should be recalled that approximately 2 million monolingual anglophones lived in homes where the Spanish language was frequently spoken (from Tables 3.1 and 3.3). There are also an unknown number of adults who were raised in such homes but went undetected in the 1976 SIE.

Differences between the 1976 SIE and the 1980 Census data can be traced, then, to the open-ended nature of the 1980 Census question, and to the method of administration of the Census questionnaire. As a result, many English-speaking Americans of non-Hispanic ancestry apparently felt legitimate in claiming to speak Spanish from time to time at home. Secondly, persons raised in homes where Spanish was spoken but who could not meet the more stringent tests for membership in the Spanish language group imposed by the SIE were counted as being Spanish-speaking persons in 1980.

Table A1.1

Ethnic Origins of the Spanish Language Population, Native Born, United States, 1976, 1980

Ethnic Ancestry	Survey	
	SIE 1976	Census 1980
Hispanic	**92.8%**	**72.2%**
Non-Hispanic		
European	1.7	11.8
Black	0.5	2.9
American	0.0	2.0
All others	5.0	11.1
Total Non-Hispanic	**7.2%**	**27.8%**
Total	100.0%	100.0%
N (thousands)	(5,103)	(6,848)

Appendix 2

Technical Data

Table A2.1

Five Years Survival Coefficients by Sex, 1976-2001, United States

Age Group	Male	Female
Birth - 4	0.9851	0.9882
5 - 9	0.9989	0.9990
10 - 14	0.9950	0.9983
15 - 19	0.9893	0.9974
20 - 24	0.9886	0.9972
25 - 29	0.9896	0.9968
30 - 34	0.9887	0.9955
35 - 39	0.9865	0.9935
40 - 44	0.9815	0.9907
45 - 49	0.9712	0.9848
50 - 54	0.9579	0.9766
55 - 59	0.9379	0.9635
60 - 64	0.9027	0.9433
65 - 69	0.8525	0.9126
70 - 74	0.7847	0.8625
75 - 79	0.6911	0.7904
80+	0.5199	0.6062

Table A2.2

Annual Projected Births per 1,000 Hispanic Women, United States, 1976-2001

Low Hypothesis:

Age Group	1976-1981	1981-1986	1986-1991	1991-1996	1996-2001
10 - 14	2.5	2.3	2.0	1.8	1.5
15 - 19	86.3	83.0	77.0	71.0	64.9
20 - 24	160.3	156.3	149.0	141.8	134.8
25 - 29	139.9	136.3	132.0	128.2	124.4
30 - 34	87.4	85.0	82.8	80.3	78.4
35 - 39	39.8	39.2	37.6	35.9	34.1
40 - 44	10.5	10.3	9.7	8.9	8.2
45 - 49	0.6	0.6	0.5	0.5	0.5

Middle Hypothesis:

Age Group	1976-1981	1981-1986	1986-1991	1991-1996	1996-2001
10 - 14	2.6	2.4	2.1	1.9	1.6
15 - 19	90.6	87.2	80.9	74.5	68.1
20 - 24	168.3	164.1	156.4	148.9	141.5
25 - 29	146.9	143.1	138.6	134.6	130.6
30 - 34	91.8	89.3	86.9	84.3	82.3
35 - 39	41.8	41.2	39.5	37.7	35.8
40 - 44	11.0	10.8	10.2	9.3	8.6
45 - 49	0.6	0.6	0.5	0.5	0.5

High Hypothesis:

Age Group	1976-1981	1981-1986	1986-1991	1991-1996	1996-2001
10 - 14	2.6	2.6	2.4	2.1	1.9
15 - 19	90.6	90.6	86.9	82.8	78.1
20 - 24	168.3	168.3	165.1	162.1	158.9
25 - 29	146.9	146.9	151.7	150.0	148.1
30 - 34	91.8	91.8	102.2	105.1	101.7
35 - 39	41.8	41.8	43.4	44.6	43.6
40 - 44	11.0	11.0	10.6	9.8	9.2
45 - 49	0.6	0.6	0.5	0.5	0.5

Table A2.3

Projected Language Characteristics of Immigrant Women, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001

Preferred Hypothesis

Language Characteristics	Time Period 1981	1986	1991	1996	2001*
English Monolingual					
0 - 4	1.17	3.27	7.66	11.76	
5 - 9	1.92	3.31	6.91	10.54	
10 - 14	1.54	2.21	5.92	10.27	
15 - 19	1.23	0.79	1.34	2.28	
20 - 24	0.29	0.59	0.96	1.64	
25 - 34	0.15	0.29	0.44	0.77	
35 - 44	0.00	0.02	0.04	0.08	
45+	0.00	0.00	0.00	0.00	
English Bilingual					
0 -4	20.96	39.57	53.17	56.93	
5 - 9	22.34	40.35	52.88	54.86	
10 - 14	16.05	21.03	27.32	31.63	
15 - 19	7.71	8.58	13.22	21.93	
20 - 24	7.01	8.41	12.58	17.79	M
25 - 34	6.96	8.25	12.39	17.77	O
35 - 44	4.29	6.41	11.80	14.57	R
45+	0.00	3.00	4.75	7.29	T
Spanish Bilingual					A
0 -4	27.59	38.33	31.70	29.93	L
5 - 9	53.80	45.76	35.00	32.31	I
10 - 14	45.74	52.67	49.17	48.13	T
15 - 19	27.04	40.03	53.33	56.77	Y
20 - 24	24.51	35.38	42.89	50.57	
25 - 34	15.30	28.56	34.80	43.81	
35 - 44	9.79	18.59	27.92	41.90	
45+	2.50	4.04	14.98	28.18	
Spanish Monolingual					
0 - 4	50.27	18.83	7.47	1.39	
5 - 9	21.95	10.57	5.21	2.29	
10 - 14	36.67	24.08	17.59	9.98	
15 - 19	64.03	50.61	32.11	19.02	
20 - 24	68.19	55.62	43.59	29.99	
25 - 34	77.60	62.90	52.37	37.64	
35 - 44	85.92	74.97	60.24	43.46	
45+	97.50	92.96	80.27	64.53	

* Further changes are produced by mortality.

continued

Table A2.3 (continued)

Projected Language Characteristics of Immigrant Men, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001

Preferred Hypothesis

Language Characteristics	Time Period 1981	1986	1991	1996	2001
English Monolingual					
0 - 4	1.17	3.27	7.66	11.76	
5 - 9	1.92	3.31	6.91	10.54	
10 - 14	1.54	2.21	5.92	10.27	
15 - 19	1.23	0.79	1.34	2.28	
20 - 24	0.29	0.59	0.96	1.64	
25 - 34	0.15	0.29	0.44	0.77	
35 - 44	0.00	0.02	0.04	0.08	
45+	0.00	0.00	0.00	0.00	
English Bilingual					
0 -4	20.96	39.57	53.17	56.93	
5 - 9	22.34	40.35	52.88	54.86	
10 - 14	16.05	21.03	27.32	31.63	
15 - 19	7.71	8.58	13.22	21.93	
20 - 24	7.01	8.41	12.58	17.79	M
25 - 34	6.96	8.25	12.39	17.77	O
35 - 44	4.29	6.41	11.80	14.57	R
45+	0.00	3.00	4.75	7.29	T
Spanish Bilingual					A
0 -4	39.19	42.68	33.42	30.24	L
5 - 9	58.86	48.20	36.20	32.83	I
10 - 14	54.20	58.23	53.23	50.43	T
15 - 19	41.81	51.71	60.74	61.16	Y
20 - 24	40.24	48.21	52.95	57.49	
25 - 34	33.20	43.08	46.88	52.50	
35 - 44	29.61	35.89	41.82	51.92	
45+	25.00	25.49	33.51	43.07	
Spanish Monolingual					
0 - 4	38.67	14.48	5.75	1.07	
5 - 9	16.88	8.13	4.01	1.76	
10 - 14	28.21	18.53	13.53	7.68	
15 - 19	49.25	38.93	24.70	14.63	
20 - 24	52.45	42.79	33.53	23.07	
25 - 34	59.69	48.39	40.29	28.96	
35 - 44	66.09	57.67	46.34	33.43	
45+	75.00	71.51	61.74	49.64	

* Further changes are produced by mortality.

continued

Table A2.3 (continued)

Projected Language Characteristics of Immigrant Women, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001

Low Mobility Hypothesis

Language Characteristics	Time Period 1981	1986	1991	1996	2001
English Monolingual					
0 - 4	0.94	2.61	6.13	9.41	
5 - 9	1.54	2.65	5.53	8.44	
10 - 14	1.23	1.77	4.74	8.21	
15 - 19	0.98	0.63	1.07	1.83	
20 - 24	0.24	0.47	0.75	1.31	
25 - 34	0.12	0.23	0.35	0.62	
35 - 44	0.00	0.02	0.03	0.04	
45 +	0.00	0.00	0.00	0.00	
English Bilingual					
0 - 4	19.06	35.97	48.34	51.75	
5 - 9	20.31	36.68	48.07	49.88	
10 - 14	14.59	19.12	24.84	28.75	
15 - 19	7.01	7.80	12.02	19.93	
20 - 24	6.37	7.65	11.44	16.17	M
25 - 34	6.33	7.50	11.26	16.15	O
35 - 44	3.90	5.83	10.73	13.25	R
45 +	0.00	0.00	4.32	6.63	T
Spanish Bilingual					A
0 - 4	24.70	40.70	37.32	37.31	L
5 - 9	54.02	49.04	40.67	39.17	I
10 - 14	43.84	52.62	51.07	52.06	T
15 - 19	21.58	35.91	51.59	57.32	Y
20 - 24	18.39	30.70	39.86	49.52	
25 - 34	8.20	23.08	30.78	41.82	
35 - 44	1.58	11.68	22.98	38.89	
45 +	0.00	0.00	7.39	22.39	
Spanish Monolingual					
0 - 4	55.30	20.71	8.22	1.52	
5 - 9	24.14	11.63	5.73	2.51	
10 - 14	40.34	26.49	19.35	10.98	
15 - 19	70.43	55.67	35.32	20.92	
20 - 24	75.00	61.18	47.95	32.99	
25 - 34	85.36	69.19	57.61	41.41	
35 - 44	94.51	82.47	66.26	47.80	
45 +	100.00	100.00	88.29	70.98	

* Further changes are produced by mortality.

continued

Table A2.3 (continued)

Projected Language Characteristics of Immigrant Men, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001

Low Mobility Hypothesis

Language Characteristics	Time Period 1981	1986	1991	1996	2001
English Monolingual					
0 - 4	0.94	2.61	6.13	9.41	
5 - 9	1.54	2.65	5.53	8.44	
10 - 14	1.23	1.77	4.74	8.21	
15 - 19	0.98	0.63	1.07	1.83	
20 - 24	0.24	0.47	0.75	1.31	
25 - 34	0.12	0.23	0.35	0.62	
35 - 44	0.00	0.02	0.03	0.04	
45 +	0.00	0.00	0.00	0.00	
English Bilingual					
0 - 4	19.06	35.97	48.34	51.75	
5 - 9	20.31	36.68	48.07	49.88	
10 - 14	14.59	19.12	24.84	28.75	
15 - 19	7.01	7.80	12.02	19.93	
20 - 24	6.37	7.65	11.44	16.17	M
25 - 34	6.33	7.50	11.26	16.15	O
35 - 44	3.90	5.83	10.73	13.25	R
45 +	0.00	0.00	4.32	6.63	T
Spanish Bilingual					A
0 - 4	37.47	45.48	39.21	37.67	L
5 - 9	59.59	51.72	41.99	39.75	I
10 - 14	53.15	58.73	55.54	54.59	T
15 - 19	37.83	48.75	59.74	62.15	Y
20 - 24	35.69	44.82	50.92	57.13	
25 - 34	27.90	39.05	44.07	51.37	
35 - 44	23.39	30.71	38.27	49.92	
45 +	17.50	21.34	27.76	38.77	
Spanish Monolingual					
0 - 4	42.54	15.93	6.32	1.17	
5 - 9	18.57	8.95	4.41	1.93	
10 - 14	31.03	20.38	14.89	8.44	
15 - 19	54.18	42.82	27.17	16.09	
20 - 24	57.70	47.06	36.89	25.38	
25 - 34	65.66	53.22	44.31	31.85	
35 - 44	72.70	63.44	50.97	36.77	
45 +	82.50	78.66	67.92	54.60	

* Further changes are produced by mortality.

continued

Table A2.3 (continued)

Projected Language Characteristics of Immigrant Women, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001

High Mobility Hypothesis

Language Characteristics	Time Period 1981	1986	1991	1996	2001
English Monolingual					
0 - 4	1.40	3.92	9.19	14.11	
5 - 9	2.30	3.97	8.29	12.65	
10 - 14	1.84	2.65	7.11	12.32	
15 - 19	1.47	0.95	1.61	2.74	
20 - 24	0.35	0.71	1.12	1.97	
25 - 34	0.17	0.35	0.53	0.93	
35 - 44	0.00	0.02	0.05	0.09	
45 +	0.00	0.00	0.00	0.00	
English Bilingual					
0 - 4	23.06	43.53	58.49	62.62	
5 - 9	24.57	44.39	58.17	60.35	
10 - 14	17.66	23.14	30.05	34.79	
15 - 19	8.48	9.43	14.55	24.12	
20 - 24	7.71	9.25	13.84	19.57	M
25 - 34	7.66	9.07	13.63	19.55	O
35 - 44	4.72	7.06	12.98	16.03	R
45+	0.00	3.30	5.22	8.02	T
Spanish Bilingual					A
0 - 4	29.83	35.44	25.53	22.01	L
5 - 9	53.17	42.03	28.80	24.92	I
10 - 14	47.16	52.32	46.85	43.82	T
15 - 19	31.84	43.61	54.66	55.85	Y
20 - 24	29.95	39.47	45.40	51.19	
25 - 34	21.63	33.40	38.23	45.30	
35 - 44	17.17	24.76	32.21	44.37	
45+	11.36	12.19	21.81	33.32	
Spanish Monolingual					
0 - 4	45.70	17.12	6.79	1.26	
5 - 9	19.95	9.61	4.74	2.08	
10 - 14	33.34	21.89	15.99	9.07	
15 - 19	58.20	46.01	29.19	17.29	
20 - 24	61.99	50.56	39.63	27.27	
25 - 34	70.54	57.18	47.61	34.22	
35 - 44	78.11	68.16	54.76	39.51	
45+	88.64	84.51	72.97	58.66	

* Further changes are produced by mortality.

continued

Table A2.3 (continued)

Projected Language Characteristics of Immigrant Men, Arriving in the United States from 1976-1981, Persons of Spanish Mother Tongue, 1976-2001

High Mobility Hypothesis

Language Characteristics	Time Period 1981	1986	1991	1996	2001
English Monolingual					
0 - 4	1.40	3.92	9.19	14.11	
5 - 9	2.30	3.97	8.29	12.65	
10 - 14	1.84	2.65	7.11	12.32	
15 - 19	1.47	0.95	1.61	2.74	
20 - 24	0.35	0.71	1.12	1.97	
25 - 34	0.17	0.35	0.53	0.93	
35 - 44	0.00	0.02	0.05	0.09	
45 +	0.00	0.00	0.00	0.00	
English Bilingual					
0 - 4	23.06	43.53	58.49	62.62	
5 - 9	24.57	44.39	58.17	60.35	
10 - 14	17.66	23.14	30.05	34.79	
15 - 19	8.48	9.43	14.55	24.12	
20 - 24	7.71	9.25	13.84	19.57	M
25 - 34	7.66	9.07	13.63	19.55	O
35 - 44	4.72	7.06	12.98	16.03	R
45+	0.00	3.30	5.22	8.02	T
					A
Spanish Bilingual					L
0 - 4	40.38	39.39	27.10	22.30	I
5 - 9	57.78	44.25	29.90	25.40	T
10 - 14	54.86	57.37	50.54	45.91	Y
15 - 19	45.27	54.23	61.40	59.84	
20 - 24	44.25	51.14	54.55	57.48	
25 - 34	37.90	46.59	49.22	53.20	
35 - 44	35.19	40.49	44.85	53.49	
45+	31.82	31.69	38.65	46.85	
Spanish Monolingual					
0 - 4	35.16	13.17	5.23	0.97	
5 - 9	15.35	7.39	3.64	1.60	
10 - 14	25.65	16.84	12.30	6.98	
15 - 19	44.77	35.39	22.45	13.30	
20 - 24	47.68	38.90	30.49	20.98	
25 - 34	54.26	43.99	36.62	26.32	
35 - 44	60.08	52.43	42.12	30.39	
45+	68.18	65.01	56.13	45.13	

* Further changes are produced by mortality.

Table A2.4

Projected Language Characteristics of Immigrants by Period, Persons Arriving in the United States from 1965-1969, Persons of Spanish Mother Tongue, 1976-2001

Low Mobility Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	2.0	19.1	40.8	38.1
1981	4.0	24.1	47.0	24.9
1986*	4.2	24.5	47.0	24.3
1991*	4.3	24.9	47.1	23.7
1996*	4.5	25.5	47.1	22.9
2001*	4.8	26.2	47.1	21.9

Preferred Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	2.0	19.1	40.8	38.1
1981	4.6	26.7	46.1	22.6
1986*	4.7	27.1	46.0	22.2
1991*	4.9	27.6	45.9	21.6
1996*	5.1	28.3	45.8	20.8
2001*	5.4	29.1	45.6	19.9

High Mobility Hypothesis :

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	2.0	19.1	40.9	38.0
1981	5.2	29.5	44.7	20.6
1986*	5.3	30.0	44.5	20.2
1991*	5.5	30.6	44.3	19.6
1996*	5.8	31.3	44.0	18.9
2001*	6.1	32.2	43.6	18.1

*Changes are produced by mortality.

continued

Table A2.4 (continued)

Projected Language Characteristics of Immigrants by Period,
Persons Arriving in the United States from 1970-1974,
Persons of Spanish Mother Tongue, 1976-2001

Low Mobility Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	0.9	14.1	40.0	45.0
1981	1.8	18.7	39.4	40.1
1986	4.1	24.2	47.4	24.3
1991*	4.2	24.5	47.4	23.9
1996*	4.3	24.7	47.6	23.4
2001*	4.4	25.1	47.7	22.8

Preferred Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	0.9	14.1	40.0	45.0
1981	2.0	20.7	40.8	36.5
1986	4.7	26.6	46.6	22.1
1991*	4.9	26.9	46.5	21.7
1996*	5.0	27.2	46.6	21.2
2001*	5.1	27.6	46.6	20.7

High Mobility Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	0.9	14.1	40.0	45.0
1981	2.2	22.8	41.8	33.2
1986	5.1	29.4	45.4	20.1
1991*	5.4	29.8	45.4	19.4
1996*	5.4	30.0	45.3	19.3
2001*	5.6	30.4	45.2	18.8

* Changes are produced by mortality.

continued

Table A2.4 (continued)

Projected Language Characteristics of Immigrants by Period, Persons Arriving in the United States from 1975-1976, Persons of Spanish Mother Tongue, 1976-2001

Low Mobility Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	0.5	6.0	24.1	69.4
1981	1.3	11.3	37.1	50.3
1986	2.3	16.7	42.4	38.6
1991	4.0	24.8	47.1	24.1
1996*	4.1	25.0	47.2	23.7
2001*	4.1	25.3	47.3	23.3

Preferred Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	0.5	6.0	24.1	69.4
1981	1.3	12.5	40.4	45.8
1986	2.7	18.4	43.5	35.4
1991	4.8	27.3	46.0	21.9
1996*	4.9	27.5	46.0	21.6
2001*	5.1	27.8	46.0	21.1

High Mobility Hypothesis:

Period	Language Characteristics			
	English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
1976	0.5	6.0	24.1	69.4
1981	1.5	13.8	43.1	41.6
1986	3.2	20.2	44.7	31.9
1991	5.7	30.1	44.3	19.9
1996*	5.8	30.3	44.3	19.6
2001*	6.0	30.6	44.2	19.2

*Changes are produced by mortality.

Table A2.5

Projected Language Practice of Native-Born Children Aged 0-4, Spanish Mother Tongue, United States, 1981*

Low Mobility Hypothesis

Age Group	Year	Language Practice			
		English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
0 - 4	1976	0.00	36.40	39.10	24.50
5 - 9	1981	3.82	40.40	45.98	9.80
10 - 14	1986	8.06	44.20	43.81	3.93
15 - 19	1991	12.71	49.42	34.50	3.37
20 - 24	1996	15.27	54.28	27.51	2.94

Preferred Hypothesis

Age Group	Year	Language Practice			
		English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
0 - 4	1976	0.00	36.40	39.10	24.50
5 - 9	1981	4.55	42.60	46.11	6.74
10 - 14	1986	9.88	48.80	39.47	1.85
15 - 19	1991	14.76	52.80	30.80	1.64
20 - 24	1996	17.66	56.75	24.13	1.46

High Mobility Hypothesis

Age Group	Year	Language Practice			
		English Monolingual	English Bilingual	Spanish Bilingual	Spanish Monolingual
0 - 4	1976	0.00	36.40	39.10	24.50
5 - 9	1981	5.28	44.80	45.02	4.90
10 - 14	1986	11.78	52.93	34.31	0.98
15 - 19	1991	17.07	56.22	25.86	0.85
20 - 24	1996	20.03	59.20	20.04	0.73

* Births projected using high immigration scenario and low language mobility hypothesis.

Table A2.6

Population Projections by Age, Sex, Place of Birth, and Language Characteristics, Spanish Language Group, United States, 1981*

EUL: English Usual Language
SUL: Spanish Usual Language
SMono: Spanish Monolingual

Native Born, 1981

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	270,510	113,830	77,670	257,830	108,490	74,030
5 - 9	276,000	129,900	10,470	281,169	140,590	11,840
10 - 14	216,670	95,570	6,160	227,400	102,460	6,060
15 - 19	192,290	73,120	13,640	207,750	80,970	11,340
20 - 24	165,230	62,220	9,890	182,570	69,992	8,220
25 - 29	123,620	62,900	7,570	136,920	70,710	7,190
30 - 34	102,960	59,810	6,520	113,990	65,750	7,770
35 - 39	71,940	50,120	5,850	80,000	52,900	7,910
40 - 44	55,150	45,200	5,980	61,090	45,500	8,640
45 - 49	47,180	44,400	7,190	51,770	42,290	10,960
50 - 54	43,990	47,800	9,590	47,340	43,440	15,130
55 - 59	26,280	32,740	9,630	28,380	29,790	13,300
60 - 64	20,130	28,730	11,550	23,280	25,570	15,010
65 - 69	11,900	18,840	10,040	16,000	16,290	12,850
70 - 74	4,490	8,300	4,840	7,460	6,370	6,970
75 - 79	2,830	5,990	3,450	5,940	3,680	5,970
80 +	1,910	5,290	1,830	4,670	2,340	5,530
(N)	1,633,090	884,750	201,840	1,734,080	907,070	228,730

Foreign Born, 1981

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	14,000	26,170	25,820	13,330	17,550	31,980
5 - 9	19,750	43,570	12,600	19,140	38,156	15,740
10 - 14	46,260	60,840	24,770	47,660	52,850	31,060
15 - 19	55,820	66,340	46,630	61,620	50,350	53,380
20 - 24	65,480	112,580	94,990	74,710	74,260	91,880
25 - 29	51,570	109,730	91,650	58,980	83,300	95,330
30 - 34	45,310	117,670	72,700	51,100	106,610	94,010
35 - 39	45,350	105,060	62,220	49,410	100,750	91,300
40 - 44	36,130	95,620	54,270	37,700	91,090	83,040
45 - 49	26,510	76,630	42,010	27,720	72,500	69,560
50 - 54	22,550	65,860	36,710	23,340	59,840	62,180
55 - 59	19,210	54,850	34,070	19,170	48,610	57,920
60 - 64	9,360	31,970	25,390	8,720	27,480	41,340
65 - 69	8,870	29,030	22,440	7,640	26,910	38,010
70 - 74	7,170	21,390	17,340	5,210	21,070	31,320
75 - 79	5,070	15,330	13,950	3,220	16,280	27,460
80 +	4,570	13,160	11,400	2,810	14,970	31,990
(N)	482,980	1,045,820	688,960	511,480	902,570	947,500

* Preferred Hypothesis

continued

Table A2.6 (continued)

Native Born, 1986

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	295,610	125,180	92,220	281,750	119,310	87,900
5 - 9	255,200	136,780	21,040	244,010	130,780	20,120
10 - 14	265,700	104,900	2,880	273,450	113,910	3,250
15 - 19	207,210	74,390	5,440	219,050	79,950	5,370
20 - 24	185,850	57,740	12,010	203,440	64,060	10,060
25 - 29	163,340	61,510	9,780	182,050	69,720	8,190
30 - 34	122,330	62,250	7,490	136,130	70,490	7,160
35 - 39	101,800	59,130	6,440	113,240	65,450	7,740
40 - 44	70,970	49,440	5,770	79,330	52,560	7,860
45 - 49	54,130	44,370	5,860	60,400	45,080	8,560
50 - 54	45,820	43,120	6,980	50,840	41,650	10,800
55 - 59	42,140	45,790	9,190	46,080	42,420	14,780
60 - 64	24,650	30,710	9,030	27,210	28,710	12,810
65 - 69	18,170	25,930	10,420	21,750	24,120	14,160
70 - 74	10,510	16,060	8,550	14,300	14,860	11,730
75 - 79	3,530	6,510	3,790	6,170	5,490	6,010
80 +	2,950	6,890	3,340	6,850	4,330	8,070
(N)	1,869,550	950,690	220,240	1,966,600	972,890	244,580

Foreign Born, 1986

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	14,000	26,170	25,820	13,330	17,550	31,980
5 - 9	41,050	67,650	20,880	39,160	58,500	25,870
10 - 14	44,270	69,530	23,840	42,510	59,280	29,810
15 - 19	61,580	93,060	52,990	62,510	73,570	61,900
20 - 24	60,550	135,000	114,100	63,710	87,020	112,470
25 - 29	74,900	156,970	132,090	81,900	98,980	120,610
30 - 34	62,890	134,380	95,250	69,930	102,470	99,800
35 - 39	55,840	133,390	79,970	62,030	120,310	106,200
40 - 44	51,310	115,920	66,120	55,840	114,430	98,210
45 - 49	38,900	101,330	54,940	40,900	97,630	88,700
50 - 54	28,020	79,540	42,510	29,770	76,330	75,170
55 - 59	21,970	66,300	38,150	23,330	61,050	69,110
60 - 64	18,790	54,650	32,260	19,440	50,820	57,970
65 - 69	9,010	30,850	22,000	8,910	28,540	39,550
70 - 74	7,890	26,050	18,610	7,430	26,370	34,770
75 - 79	5,850	17,830	13,600	4,830	19,590	27,290
80 +	6,070	18,220	15,530	4,580	23,280	40,830
(N)	602,890	1,326,840	848,630	630,110	1,112,110	1,119,750

continued

Table A2.6 (continued)

Native Born, 1991

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	310,600	130,320	96,770	296,040	124,210	92,240
5 - 9	278,970	155,280	24,980	266,730	148,870	23,890
10 - 14	249,980	117,710	5,780	239,030	112,550	5,530
15 - 19	251,860	81,210	2,540	261,790	88,500	2,880
20 - 24	199,570	57,820	4,790	213,520	62,610	4,770
25 - 29	183,730	57,080	11,870	202,870	63,870	10,040
30 - 34	161,650	60,870	9,670	181,460	69,500	8,170
35 - 39	120,950	61,550	7,410	135,530	70,170	7,130
40 - 44	100,430	58,330	6,360	122,510	65,050	7,690
45 - 49	69,650	48,530	5,660	78,590	52,070	7,780
50 - 54	52,570	43,090	5,700	59,480	44,390	8,430
55 - 59	43,890	41,310	6,669	49,650	40,670	10,540
60 - 64	39,520	42,950	8,620	44,390	40,880	14,240
65 - 69	22,250	27,720	8,160	25,670	27,080	12,090
70 - 74	15,490	22,110	8,880	19,850	22,010	12,920
75 - 79	7,960	12,600	6,710	12,330	12,820	10,120
80 +	3,970	8,080	4,360	9,040	6,960	9,650
(N)	2,113,050	1,026,560	224,950	2,208,470	1,051,790	248,090

Foreign Born, 1991

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	14,000	26,170	25,820	13,330	17,550	31,980
5 - 9	41,050	67,650	20,880	39,160	58,500	25,870
10 - 14	72,350	89,170	27,370	68,890	76,830	33,640
15 - 19	62,100	97,110	54,270	59,220	75,320	63,240
20 - 24	76,590	154,420	117,250	74,800	104,120	117,110
25 - 29	73,160	182,680	143,720	73,770	115,700	133,540
30 - 34	85,920	185,590	130,760	91,160	120,470	124,190
35 - 39	69,700	151,930	103,760	76,160	115,790	117,000
40 - 44	60,030	143,050	86,100	66,740	129,070	116,480
45 - 49	53,320	120,720	67,580	58,580	117,160	104,620
50 - 54	38,040	100,600	60,030	42,610	101,560	93,680
55 - 59	27,540	79,170	43,610	31,250	79,690	77,630
60 - 64	20,990	64,090	37,770	23,120	60,880	70,470
65 - 69	17,230	50,340	29,470	18,770	49,010	56,510
70 - 74	7,830	26,960	19,050	8,390	27,000	37,230
75 - 79	6,270	20,920	15,320	6,560	23,330	31,310
80 +	7,290	22,200	17,930	6,760	30,140	47,030
(N)	733,390	1,582,770	1,000,680	759,280	1,302,090	1,281,530

continued

Table A2.6 (continued)

Native Born, 1996

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	320,410	131,630	93,940	305,590	125,460	89,540
5 - 9	292,710	162,220	26,220	279,870	155,090	25,070
10 - 14	274,590	134,430	6,860	262,570	128,540	6,560
15 - 19	243,290	89,660	5,100	233,390	86,040	4,900
20 - 24	243,950	59,890	2,240	256,470	66,620	2,560
25 - 29	197,300	57,160	4,730	212,920	62,430	4,750
30 - 34	181,820	56,490	11,750	202,220	63,670	10,000
35 - 39	159,820	60,190	9,560	180,650	69,190	8,130
40 - 44	119,320	60,710	7,310	134,650	69,720	7,090
45 - 49	98,560	57,250	6,240	111,460	64,420	7,620
50 - 54	67,650	47,130	5,550	77,400	51,280	7,670
55 - 59	50,360	41,280	5,460	58,080	43,350	8,230
60 - 64	41,170	38,750	6,280	47,840	39,190	10,160
65 - 69	35,680	38,770	7,780	41,880	38,560	13,430
70 - 74	18,970	23,630	6,950	23,420	24,710	11,030
75 - 79	12,160	17,350	6,970	17,120	18,980	11,150
80 +	5,550	8,710	4,640	9,750	10,130	7,990
(N)	2,363,260	1,085,220	217,530	2,455,070	1,117,380	235,870

Foreign Born, 1996

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	14,000	26,170	25,820	13,330	17,550	31,980
5 - 9	41,050	67,650	20,880	39,160	58,500	25,870
10 - 14	72,350	89,170	27,370	68,890	76,830	33,640
15 - 19	92,210	114,860	54,880	87,580	92,010	63,980
20 - 24	77,650	157,260	117,320	71,850	105,320	117,040
25 - 29	90,760	201,160	143,960	86,190	133,080	134,860
30 - 34	89,370	211,450	136,160	87,150	139,070	130,670
35 - 39	98,290	208,530	126,320	100,650	140,020	131,110
40 - 44	77,250	166,000	101,230	82,370	128,680	121,370
45 - 49	63,560	149,510	83,390	70,590	137,250	118,800
50 - 54	52,750	122,560	68,540	60,730	125,270	104,130
55 - 59	39,050	103,030	54,870	44,020	105,380	94,390
60 - 64	26,460	77,120	41,790	29,950	78,610	79,710
65 - 69	19,350	59,460	33,770	22,490	60,420	66,640
70 - 74	14,920	43,950	25,050	17,580	46,720	47,900
75 - 79	6,260	21,860	15,490	7,480	24,340	32,840
80 +	4,850	17,900	14,240	6,250	23,290	33,680
(N)	880,120	1,837,640	1,091,070	896,270	1,492,350	1,368,610

continued

Table A2.6 (continued)

Native Born, 2001

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	325,660	132,130	90,680	310,390	125,940	86,430
5 - 9	301,160	161,110	25,450	287,950	154,050	24,330
10 - 14	287,870	140,510	7,200	275,260	134,350	6,890
15 - 19	267,520	103,290	6,060	256,640	99,120	5,810
20 - 24	237,620	67,970	4,490	229,790	65,810	4,350
25 - 29	241,170	59,120	2,210	255,750	66,440	2,550
30 - 34	195,250	56,570	4,680	212,230	62,230	4,740
35 - 39	179,770	55,850	11,620	201,310	63,380	9,960
40 - 44	157,660	59,370	9,440	179,480	68,740	8,080
45 - 49	117,110	59,590	7,170	133,400	69,070	7,020
50 - 54	95,730	55,610	6,060	109,770	63,440	7,500
55 - 59	64,810	45,150	5,270	75,590	50,080	7,490
60 - 64	47,240	38,720	5,120	55,970	41,770	7,930
65 - 69	37,160	34,980	5,670	45,120	36,970	9,580
70 - 74	30,410	33,050	6,630	38,220	35,190	12,260
75 - 79	14,890	18,540	5,460	20,200	21,310	9,510
80 +	11,260	16,510	7,230	19,440	21,150	13,660
(N)	2,612,280	1,138,150	210,430	2,706,490	1,179,030	228,080

Foreign Born, 2001

Age Group	Male			Female		
	EUL	SUL	SMono	EUL	SUL	SMono
0 - 4	14,000	26,170	25,820	13,330	17,550	31,980
5 - 9	41,050	67,650	20,880	39,160	58,500	25,870
10 - 14	72,350	89,170	27,370	68,890	76,830	33,640
15 - 19	92,210	114,860	54,880	87,580	92,010	63,980
20 - 24	107,430	174,820	117,920	100,130	121,980	117,780
25 - 29	91,810	203,960	144,030	83,250	134,280	134,780
30 - 34	107,020	229,850	136,410	99,530	156,390	131,980
35 - 39	101,910	234,230	131,680	96,660	158,530	137,550
40 - 44	105,670	222,020	123,520	106,690	152,750	135,380
45 - 49	80,670	172,430	98,330	86,070	136,860	123,650
50 - 54	62,990	151,410	84,200	72,570	145,060	118,100
55 - 59	53,400	124,860	63,320	61,720	128,540	104,610
60 - 64	37,520	100,390	52,790	42,260	103,360	95,860
65 - 69	24,560	72,120	37,830	28,940	77,140	75,360
70 - 74	16,930	52,560	29,270	20,970	57,130	57,150
75 - 79	12,030	36,000	20,730	15,400	41,360	42,050
80 +	7,140	26,280	19,580	9,940	34,330	46,570
(N)	1,028,700	2,098,760	1,188,540	1,033,080	1,692,590	1,476,300

Appendix 3

Comparison of the UQAM and U.S. Bureau of the Census Population Models

The population model which we have developed in this report can be compared to that developed by Gregory Spencer[1] of the U.S. Bureau of the Census, an exercise which is useful because it permits us to assess in a general way the validity of the UQAM (Université du Québec à Montréal) model.

Such an assessment requires, however, that we develop population parameters for the year 1982, the base year used by Spencer in the preparation of his population projections. Further, since Spencer's projections rely heavily on data derived from the 1980 U.S. Census, we have attempted to produce ethnic population projections from the SIE data for the year 1980. The mid-1982 estimates were subsequently obtained by linear interpolation between the 1980 and 1985 population projections.

Our approach to the projection of ethnic population data consisted in implementing a number of changes in the modeling process. First of all, we eliminated immigrants who had arrived during the 1975-1976 time period from the SIE data, thereby creating a base population for the beginning of the 1975 calendar year. We then admitted 1.25 million total immigrants for the 1975-1979 period. For the 1980-2000 time frame we then emulated the parameters applied in Spencer's middle scenario, admitting 143,000 immigrants per year and adopting his middle fertility schedule (our high fertility schedule). To simulate a model of ethnic (ancestry) population growth, we refused to let persons leave the Spanish language group. All English bilingual mothers gave birth to children who continued to speak Spanish throughout their lifetimes, etc.

The application of these procedures produced an estimated population of 11.44 million persons at midyear 1982. This figure is 4.37 million lower than that furnished by Spencer, a number which we may conceive as representing the size of the English monolingual population in 1982. This population, while excluded from the UQAM model, will also experience population growth during the 1982-2000 time period, if only because of the high rate of fertility which characterizes the Hispanic group as a whole.

Since we have no detailed data on English monolingual Hispanics, we have approximated the size of this population in the year 2000 by modeling their growth on that of the American Black community. According to data published by the U.S. Bureau of the Census[2], the Black population of the United States will climb from 27.10 to 35.75 million persons during this period. The net impact of immigration is very low, accounting for the presence of approximately 1 million immigrants and up to 300,000 of their children. When these individuals are subtracted, net growth over the period may be estimated at 27.1 percent.

The rate of growth for the Hispanic ancestry group will, nonetheless, be substantially higher than this figure. First of all, the proportion of Hispanic women in the prime child-bearing years is slightly higher. Secondly, they will give birth to larger numbers of children, the total fertility rate of the Hispanic group (approximately 2.7 children per woman) being substantially higher than that of Black women over this period (2.2 children). Once these factors have been taken into account, it would appear that the original English monolingual Hispanic population will likely reach 6.0 million persons in the year 2000.

According to the parameters outlined earlier in this appendix, the Hispanic ancestry group retained in our model will number approximately 19.1 million persons at midyear 2000. When this figure is added to the estimated 6.0 million English monolinguals in the Hispanic ancestry group[3], the total Hispanic ancestry group may be estimated at 25.1 million persons at that time. This figure compares very favorably with that projected by Spencer's middle scenario—25.2 million.

The age structure of the population produced by the two models is also relatively similar. Generally speaking, the Bureau's 1982 base population is slightly younger than is the UQAM 1982 population. On the other hand, the final UQAM population is slightly younger in 2001 than is that produced by the Census model. This finding is largely explained by the fact that immigrants admitted in the UQAM model are somewhat younger than those admitted in the Bureau's model[4].

Differences between the results produced by the UQAM model and those published by the Census reflect, therefore, changes in the population parameters being estimated. When similar parameters are employed, similar results are obtained.

Notes:

1. Spencer, Gregory. *Projections of the Hispanic Population: 1983-2080*, Current Population Reports, Population Estimates and Projections, Series P-25, No. 995. Washington: U.S. Department of Commerce, Bureau of the Census, 1986.
2. Spencer, Gregory. *Projections of the Population of the United States, by Age, Sex, and Race: 1983 to 2080*, Current Population Reports, Population Estimates and Projections, Series P-25, No. 952. Washington: U.S. Department of Commerce, Bureau of the Census, 1984.
3. That is to say, those persons and their descendants who were excluded from the 1975 sample base. There are, of course, other English monolinguals generated by the population model.
4. This point is discussed in Chapter 11.

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CALVIN VELTMAN, Professor of Urban Studies at l'Université du Québec à Montréal since 1980, is a native of Chicago.

His interest in the sociology of ethnolinguistic groups led him to the analysis of the 1971 Census of Canada, a data base which made possible the direct comparison of language use and language background, or mother tongue. He prepared his initial analysis of language shift in the United States for the U.S. Center for Education Statistics, leading in 1983 to publication of ***Language Shift in the United States.***

Dissatisfied with the limitations imposed by the use of secondary data, Dr. Veltman conducted field studies of language practice in the Greek and Portuguese communities in Montreal, and among high school students in Alsace, France. These were the studies that led him to conclude that most language shift is accomplished in early childhood, underlining the crucial importance of the elementary school experience.

In 1985 he began work on the development of population models which simulate the flow of immigrants and their children into national language communities. The Conseil de la langue française in Québec published his ***L'avenir du français aux Etats-Unis*** in 1987, a monograph which prepared the way for the larger study of Hispanic Americans, ***The Future of the Spanish Language in the United States***, published by the Hispanic Policy Development Project.

Dr. Veltman holds a B.A. degree in economics from Wheaton College, Illinois, and a Ph.D. in sociology from New York University.

látigo ['latigo] *sm* whip. **latigazo** *sm* whiplash.
latín [la'tin] *sm* Latin. **latinoamericano, -a** *s, adj* Latin American.
latir [la'tir] *v* beat; throb. **latido** *sm* heartbeat; throb.
latitud [lati'tud] *sf* latitude; breadth.
lato *adj* broad.
latón [la'ton] *sm* brass.
latoso [la'toso] *adj* annoying; boring.
latrocinio [latro'cinjo] *sm* theft.
laúd [la'ud] *sm* lute.
laudable [lau'daßle] *adj* praiseworthy.
laurel [lau'rel] *sm* laurel; [illegible]
laureado *adj* laureate. **l**
honour; reward. **lauro s**
lava ['laßa] *sf* lava.
lavar [la'ßar] *v* wash. **lava**
washable. **lavabo** *sm* wa
lavación *sf* lotion; wash
washing-place. **lavado s**
washing. **lavadora** *sf* wa
machine. **lavandería** *sf*
laxante [lak'sante] *sm* lax
sf laxity.
lazo ['laco] *sm* lasso; loop;
snare; link.
leal [le'al] *adj* loyal. **lealda**
lebrel [le'ßrel] *sm* greyhou
lección [lek'cjon] *sf* lesson
sm, sf reader; lecturer. **le**
ing matter.
leche ['let che] *sf* milk. **lechería** *sf*
dairy. **lechero** *sm* milkman.
lecho ['let cho] *sm* bed; layer.
lechuga [le't chuga] *sf* lettuce.
lechuza [le't cuca] *sf* owl.
leer [le'er] *v* read.
legación [lega'cjon] *sf* legation. **legado**
sm legacy; ambassador.
legal [le'gal] *adj* legal; lawful. **legalidad** *sf* legality. **legalización** *sf* legalization.
legalizar *v* legalize.
legar [le'gar] *v* bequeath; depute.
legendario [lexen'darjo] *adj* legendary.
lego ['lego] *adj* lay. *sm* layman.
legua ['legwa] *sf* league.

legumbre [le'gumbre] *sf* vegetable.
lejía [le'xia] *sf* bleach.
lejos ['lexos] *adv* far away. **a lo lejos** in the distance. *sm* perspective; background. **lejanía** *sf* distance. **lejano** *adj* far-away.
lema ['lema] *sf* motto.
lencería [lence'ria] *sf* linen goods; lingerie.
lengua ['lengwa] *sf* tongue; language. **trabarse la lengua** become tongue-tied. **lenguaje** *sm* language; speech; style.
lan[illegible]'gwado] *sm* (*zool*) sole.
[illegible]'gweta] *sf* (*de zapato*)
[illegible]lad] *sf* lenience; mildness.
[illegible]s lens. **lente de aumento** glass. **lentes** *pl* glasses, **entes de contacto** con-
[illegible]xa] *sf* lentil.
[illegible]*adj* slow. lentitud *sf* slow-
[illegible]*sf* firewood.
[illegible]n lion. **leona** *sf* lioness. leonine.
[illegible]*sf* injury. **leproso** *adj* lep-
[illegible]] *sf* leprosy. **lesionar** *v*
[illegible]**o** *adj* injurious.
[illegible]ia] *sf* litany; long list.
letargo [le'targo] *sm* lethargy. **letárgico** *adj* lethargic.
letra ['letra] *sf* letter; handwriting; lyric; (*com*) draft. **Letras** *sf pl* literature; Arts. **letra mayúscula** capital letter. **letra minúscula** lower-case letter. **letrado** *sm* lawyer. **letrero** *sm* label; sign.
leva ['leßa] *sf* (*tecn*) cam; lever. **árbol de levas** camshaft.
levadizo [leßa'dico] *sdj* that can be lifted. **puente levadizo** *sm* drawbridge
Levadura [leßa'dura] *sf* leaven, yeast.
levantar [leßan'tar] *v* lift; raise; erect. **levantarse** *v* rise, get up.

Hispanic Policy Development Project